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February 2001

# MONTHLY LABOR REVIEW

U.S. Department of Labor

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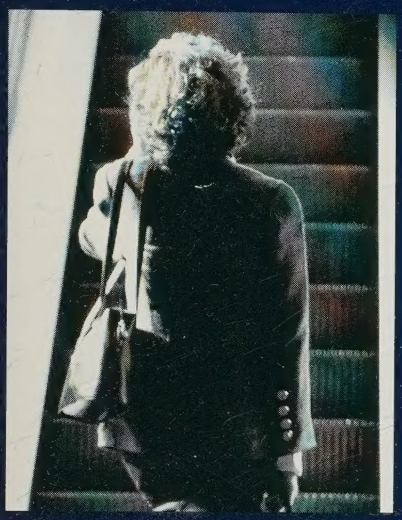

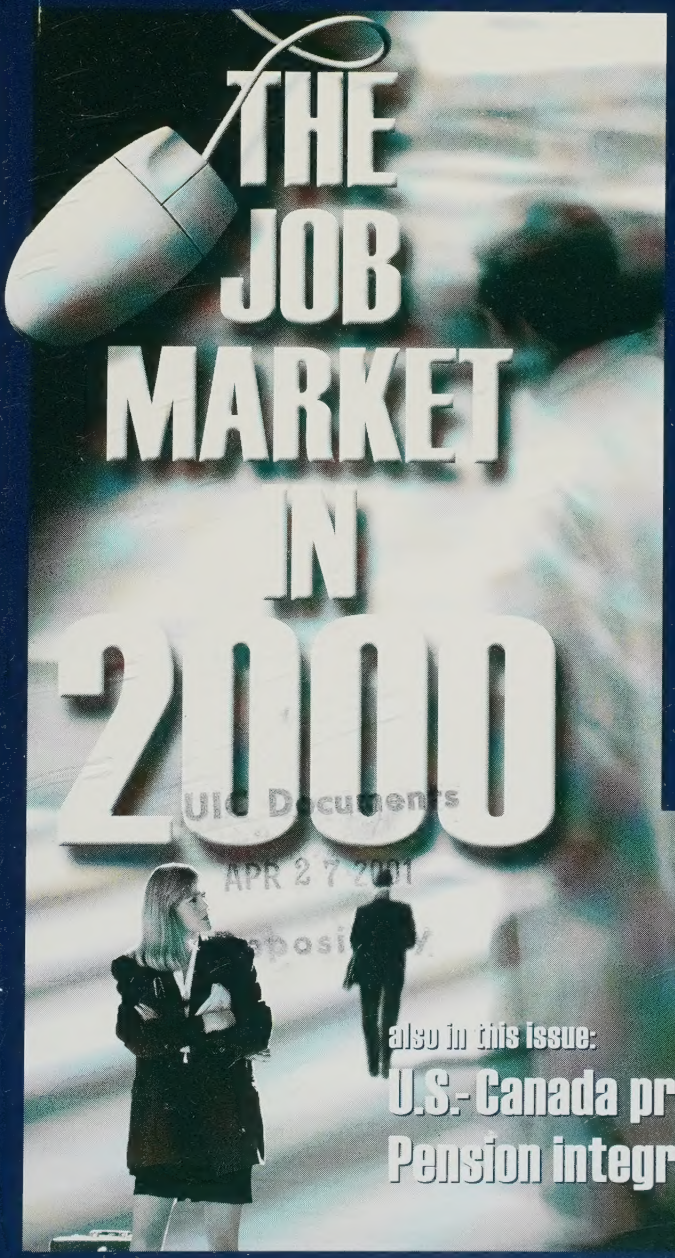

## THE JOB MARKET IN 2000

UIC Documents
APR 27 2001

also in this issue:

U.S.-Canada productivity gap

Pension integration

U.S. Department of Labor
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Bureau of Labor Statistics
Katharine G. Abraham, Commissioner

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## The February *Review*

Our annual labor market review reflects a somewhat mixed view of 2000. The year began well; the first half's annualized employment growth rate was 2.3 percent, and the unemployment rate was dropping toward the lowest levels in 30 years. Improved labor market conditions were widely diffused as well. Jennifer L. Martel and David S. Langdon report, for example, that employment-to-population ratios for black and Hispanic workers reached record highs. However, slowdowns in construction and the service-producing sector yielded a sharp slowdown in overall job creation by yearend.

The article by Lucy P. Eldridge and Mark K. Sherwood explores the significant gap between manufacturing productivity rates in the United States and Canada. Over the period 1978 through 1998, factory productivity growth in the United States averaged a full percentage point higher, and the gap seemed to be widening in the latest data. Among the explanatory factors, they cite extraordinary productivity growth in the information technology sector in the United States, offset somewhat by higher growth in transportation equipment productivity within Canada.

The final article explores the impact of pension plans on retirement income that explicitly integrate information on Social Security benefits in determining the plan's payout. Keith A. Bender finds that such plans might slightly increase benefits for workers with comparatively low tenure but decrease benefits for those retiring after longer tenures.

## Business services in librarians' future

The number of librarian jobs is projected to grow about 5 percent between 1998 and 2008. However, the occupation is expected to grow much faster in various industries, notably business services.

Librarian jobs in the business services industry are projected to grow by 87 percent between 1998 and 2008, by far the largest percent increase. Museums and botanical and zoological gardens are expected to experience a 51-percent growth rate, followed by social services at 44 percent, engineering and management services at 39 percent, and legal services at 22 percent. More moderate growth rates of 12 and 8 percent, respectively, are expected in local governments and State governments (exclusive of education and hospitals).

Education is not expected to record any growth in librarian employment, while the Federal Government is projected to have 12 percent fewer librarians in 2008 than in 1998. For more information, see "Librarians: Information experts in the information age," by Olivia Crosby, *Occupational Outlook Quarterly*, Winter 2000–01.

## Stoppages shorter in 1999

The average length of major work stoppages that began in 1999 was about 16 days, compared with 26 days in 1998 and 20 days in 1997. Disputes were concentrated in the 1–2 day and 7–14 day ranges in 1999. About 70 percent of stoppages lasted for 2 weeks or less, while 18 percent extended for more than 21 days.

The longest stoppage in effect in 1999 was at Kaiser Aluminum; the strike began in October 1998 and continued into 2000. The second longest was at Continental General Tire Company. Additional information is available from "Work Stoppages in 1999" by Fehmida Sleemi, *Compensation and Working Conditions*, Fall 2000. Major work stoppages are defined as strikes or lockouts that idle 1,000 or more workers and last at least one shift.

## Union men and women

Union membership continued to be higher among men (15.2 percent) than women (11.5 percent) in 2000. The gap in unionization rates between the sexes, however, fell to 3.7 percentage points in 2000 from 4.7 percentage points in 1999. The gender gap in unionization rates has been closing over time. In 1983, the rate for men was 24.7 percent, and the rate for women was 14.6 percent, a difference of 10.1 percentage points. Read news release USDL 01–21, "Union Members in 2000," for more details.

## Mass layoffs in 2000

In 2000, there were 15,738 layoff events and 1,835,592 initial claimants for unemployment insurance in the 50 States and District of Columbia. Both the number of events and initial claimants were higher than in 1999, when layoff events totaled 14,909, and initial claimants, 1,572,399.

In 2000, manufacturing accounted for 35 percent of all mass layoff events and 42 percent of initial claims filed, essentially unchanged from 1999 (33 percent and 40 percent, respectively) and 1998. Initial claim filings were most numerous in transportation equipment (192,047), followed by food and kindred products (88,942) and industrial machinery and equipment (73,215). □

Communications regarding the *Monthly Labor Review* may be sent to the Editor-in-Chief at the addresses on the inside front cover, or faxed to (202) 691–5899. News releases discussed in this issue are available at

**http://stats.bls.gov/newsrels.htm**

# The job market in 2000: slowing down as the year ended

*As the unemployment rate edged down to a 31-year low, the job market entered an unprecedented 10th year of expansion, though job growth slowed a bit in the second half of the year*

Jennifer L. Martel
and
David S. Langdon

The Nation's current economic expansion entered its 10th year in 2000, becoming the longest expansionary period on record. However, by the end of the year, signs emerged that the rate of expansion was slowing.

In the first half of the year, the Federal Reserve continued to raise interest rates as part of a policy designed to slow the economy and keep inflation in check.[1] The Federal Reserve aimed to bring the economy in for a "soft landing." Real gross domestic product (GDP) was relatively strong during the first half of the year, growing at an annual rate of 4.8 percent in the first quarter and 5.6 percent in the second quarter. By the third quarter, however, the rate of growth slowed to 2.2 percent.[2] The deceleration in real GDP primarily reflected downturns in inventory investment and in Federal Government spending, and a deceleration in nonresidential fixed investment.[3]

Nonfarm payroll employment continued to grow in 2000, at an average over-the-year rate of 2.3 percent in first half of the year, 2.0 percent in the third quarter, and 1.6 percent in the fourth quarter. Most of the job growth in 2000 occurred in the service-producing industries. Mining employment also increased, in response to rising oil prices. Employment in construction slowed over the year, affected by the rise in interest rates. Manufacturing employment fell overall, although some industries related to information technology saw their payrolls increase. (See table 1.)

The unemployment rate was 4.0 percent in the fourth quarter of 2000, the lowest rate since 1969, and the proportion of the population that was employed remained at record-high levels. Workers in most major demographic groups benefited from the relatively healthy labor market in 2000, and the year was especially strong for minorities. Blacks and Hispanics both closed slightly their unemployment rate gap between whites, and blacks closed slightly their earnings gap between whites in 2000.

This article provides snapshots of several important developments or issues related to the U.S. economy and labor market in 2000. The primary sources of data are the Current Employment Statistics (CES) survey and the Current Population Survey (CPS).[4] Both of these surveys are conducted monthly (See box on page 4.); however, quarterly averages are used in this analysis unless otherwise noted, and over-the-year changes are based on comparisons of fourth quarter 1999 and 2000 data, unless otherwise noted.

Jennifer L. Martel is an economist in the Division of Labor Force Statistics and David S. Langdon is an economist in the Division of Monthly Industry Employment Statistics, Bureau of Labor Statistics.

***The price of oil, which had soared in 1999 and continued its ascent in 2000, did not seem to have a dramatic effect on industry employment trends in 2000.*** *Crude petroleum prices spent much of the year above $30 per barrel, or more than 2.5 times their 1998 level and nearly 2 times higher than 1999's level. Their rise benefited some industries while hurting others.*

Tracing job growth or losses to a rise in energy prices is problematic in many industries, but it is relatively straightforward for *mining*. After falling by 44,000 in 1999, mining employment recovered partially last year.[6] Its improvement came solely from hiring in *oil and gas extraction*, which brought on 21,000 workers, as rising oil prices spurred increased activity in this industry. The hiring halted in mid-summer, when crude petroleum prices stabilized somewhat, only to pick up again in autumn as oil prices rose.[7] Even with the recovery in oil prices, however, other factors worked to temper job gains in oil and gas extraction. For example, merger activity in 1998–99 resulted in more streamlined operations requiring fewer workers.[8] In addition, many oil and gas companies considered the high price of crude petroleum to be a temporary development; consequently, they were wary to invest in projects that would become unprofitable if prices fell again.[9] So, although the price of crude oil spent much of the year at the highest levels since the Gulf War, production and employment, while improving, did not fully recover from their 1998–99 decline. (See chart 1.)

That situation contrasted sharply with *petroleum refining*, in which production reached a record pace—while its employment slipped to its lowest level on record (this employment series begins in 1947).[10] Output per employee rose nearly 38 percent between 1991 and 1997, while employment fell by 20 percent from a peak of 123,000 jobs. Refineries cut another 11,000 positions between 1997 and 1999, but trimmed payrolls by only 2,000 last year, possibly supported by the high price of oil.

Tracing the effects of the energy price hikes outside the petroleum industry is less straightforward. Despite the surge in energy prices, the overall effect on prices paid by producers and consumers was minimal. Growth in the Consumer Price Index for All Urban Wage Earners and Clerical Workers (CPI-W) accelerated slightly, to 3.4 percent (December 1999 to December 2000), and growth in average hourly earnings of production or nonsupervisory workers in the private economy notched up to 4.2 percent for the same period. Nevertheless, relatively flat real earnings and a 14-percent surge in gas prices did not

## Conceptual differences between employment estimates from the Current Population Survey (household survey) and the Current Employment Statistics Survey (establishment survey)

The Bureau of Labor Statistics maintains two monthly data series on employment that are independently obtained: the estimate of total nonfarm jobs, derived from the Current Employment Statistics (CES) survey and the estimate of total employment, derived from the Current Population Survey (CPS).

The CES survey is an employer-based survey that provides data on the number of jobs within industries. The CPS is a survey of households that provides data on the labor force status (employed, unemployed, and not in the labor force) of individuals, and includes information on their demographic as well as socioeconomic characteristics. The surveys are largely complementary.

Employment estimates from the CPS are for persons in any type of work arrangement: wage and salary workers, self-employed persons, and unpaid workers in family businesses. To be considered employed, an *unpaid family worker* must have worked 15 hours or more in an enterprise operated by a member of the family. Estimates from the CES survey refer only to persons on nonfarm payrolls. As a result, the count of employment from the CPS is larger than from the CES survey.

Partially offsetting the higher estimates from the CPS is the fact that the CPS is a count of persons, and individuals are counted only once, regardless of the number of jobs they hold. In contrast, the establishment survey is a count of jobs and includes each job for persons who work in more than one establishment.

There are other differences in the surveys' methodology and coverage. For example, the reference period for the CPS is the *week* that includes the 12th day of the month, while, for the CES survey, it is the *pay period* that includes the 12th of the month. Pay periods vary in length and can be longer than 1 week. It is therefore possible for the CES survey estimate of employment to reflect a longer reference period than that used for the CPS.

The "universe" for the CPS is the civilian noninstitutional population. This includes persons 16 years of age and older residing in the United States who are not inmates of institutions (for example, penal and mental facilities, homes for the aged), and who are not on active duty in the Armed Forces. In this regard, the coverage of the CES survey is broader: there is no age restriction in the CES, uniformed military personnel who hold civilian jobs are covered because of their civilian employment, and persons who commute into the United States from Mexico or Canada to work are counted as employed.

## Table 1. Employees on nonfarm payrolls by industry, seasonally adjusted quarterly averages, 1994–2000

[Numbers in thousands]

| Industry | Fourth quarter 1994 | Fourth quarter 1999 | Fourth quarter 2000 | Change, fourth quarter to fourth quarter | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 1998 to 1999 | | Average, 1995 to 1999 | | 1999 to 2000 | |
| | | | | Thousands | Percent | Thousands | Percent | Thousands | Percent |
| Total nonfarm | 115,598 | 129,783 | 131,863 | 2,816 | 2.2 | 2,837 | 2.3 | 2,080 | 1.6 |
| Total private | 96,379 | 109,507 | 111,415 | 2,491 | 2.3 | 2,626 | 2.6 | 1,908 | 1.7 |
| Goods-producing | 24,163 | 25,524 | 25,624 | 55 | .2 | 272 | 1.1 | 100 | .4 |
| Mining | 596 | 529 | 540 | –44 | –7.7 | –13 | –2.4 | 11 | 2.1 |
| Metal mining | 49 | 45 | 44 | –2 | –4.3 | –1 | –1.7 | –1 | –2.2 |
| Oil and gas extraction | 332 | 289 | 310 | –35 | –10.8 | –9 | –2.7 | 21 | 7.3 |
| Nonmetallic minerals, except fuels | 105 | 112 | 108 | 0 | .0 | 1 | 1.3 | –4 | –3.6 |
| Construction | 5,089 | 6,513 | 6,736 | 334 | 5.4 | 285 | 5.1 | 223 | 3.4 |
| General building contractors | 1,210 | 1,469 | 1,522 | 61 | 4.3 | 52 | 4.0 | 53 | 3.6 |
| Heavy construction, except building | 746 | 877 | 882 | 18 | 2.1 | 26 | 3.3 | 5 | .6 |
| Special trade contractors | 3,132 | 4,167 | 4,332 | 254 | 6.5 | 207 | 5.9 | 165 | 4.0 |
| Manufacturing | 18,478 | 18,482 | 18,347 | –234 | –1.3 | 1 | .0 | –135 | –.7 |
| Durable goods | 10,583 | 11,085 | 11,047 | –90 | –.8 | 100 | .9 | –38 | –.3 |
| Lumber and wood products | 768 | 831 | 808 | 11 | 1.3 | 13 | 1.6 | –23 | –2.8 |
| Furniture and fixtures | 513 | 553 | 553 | 15 | 2.8 | 8 | 1.5 | 0 | .0 |
| Stone, clay, and glass products | 537 | 564 | 562 | 0 | .0 | 5 | 1.0 | –2 | –.4 |
| Primary metal industries | 709 | 698 | 687 | –10 | –1.4 | –2 | –.3 | –11 | –1.6 |
| Fabricated metal products | 1,415 | 1,520 | 1,532 | 7 | 0.5 | 21 | 1.4 | 12 | .8 |
| Industrial machinery and equipment | 2,015 | 2,131 | 2,126 | –52 | –2.4 | 23 | 1.1 | –5 | –.2 |
| Computer and office equipment | 350 | 370 | 362 | –8 | –2.1 | 4 | 1.1 | –8 | –2.2 |
| Electronic and other electrical equipment | 1,594 | 1,672 | 1,724 | –10 | –.6 | 16 | 1.0 | 52 | 3.1 |
| Electronic components and accessories | 556 | 639 | 693 | –4 | –.6 | 17 | 2.8 | 54 | 8.5 |
| Transportation equipment | 1,789 | 1,870 | 1,811 | –38 | –2.0 | 16 | .9 | –59 | –3.2 |
| Motor vehicles and equipment | 947 | 1,022 | 988 | 13 | 1.3 | 15 | 1.5 | –34 | –3.3 |
| Aircraft and parts | 469 | 474 | 456 | –50 | –9.5 | 1 | .2 | –18 | –3.8 |
| Instruments and related products | 850 | 849 | 850 | –17 | –2.0 | 0 | .0 | 1 | .1 |
| Miscellaneous manufacturing industries | 393 | 398 | 394 | 7 | 1.8 | 1 | .3 | –4 | –1.0 |
| Nondurable goods | 7,895 | 7,397 | 7,300 | –145 | –1.9 | –100 | –1.3 | –97 | –1.3 |
| Food and kindred products | 1,679 | 1,674 | 1,669 | –8 | –.5 | –1 | –.1 | –5 | –.3 |
| Tobacco products | 42 | 38 | 37 | –2 | –5.0 | –1 | –2.0 | –1 | –2.6 |
| Textile mill products | 681 | 550 | 530 | –34 | –5.8 | –26 | –4.2 | –20 | –3.6 |
| Apparel and other textile products | 976 | 672 | 628 | –64 | –8.7 | –61 | –7.2 | –44 | –6.5 |
| Paper and allied products | 695 | 665 | 657 | –8 | –1.2 | –6 | –.9 | –8 | –1.2 |
| Printing and publishing | 1,543 | 1,549 | 1,558 | –14 | –.9 | 1 | .1 | 9 | .6 |
| Chemicals and allied products | 1,046 | 1,031 | 1,024 | –11 | –1.1 | –3 | –.3 | –7 | –.7 |
| Petroleum and coal products | 150 | 132 | 129 | -5 | –3.6 | –4 | –2.5 | –3 | –2.3 |
| Rubber and miscellaneous plastics products | 973 | 1,009 | 996 | 7 | .7 | 7 | .7 | –13 | –1.3 |
| Leather and leather products | 111 | 76 | 72 | –6 | –7.3 | –7 | –7.3 | –4 | –5.3 |
| Service-producing | 91,435 | 104,259 | 106,240 | 2,761 | 2.7 | 2,565 | 2.7 | 1,981 | 1.9 |
| Transportation and public utilities | 6,059 | 6,895 | 7,063 | 198 | 3.0 | 167 | 2.6 | 168 | 2.4 |
| Transportation | 3,829 | 4,451 | 4,565 | 119 | 2.7 | 124 | 3.1 | 114 | 2.6 |
| Railroad transportation | 241 | 226 | 220 | –5 | –2.2 | –3 | –1.3 | –6 | –2.7 |
| Local and interurban passenger transit | 409 | 490 | 499 | 14 | 2.9 | 16 | 3.7 | 9 | 1.8 |
| Trucking and warehousing | 1,558 | 1,820 | 1,845 | 51 | 2.9 | 52 | 3.2 | 25 | 1.4 |
| Water transportation | 173 | 191 | 205 | 5 | 2.7 | 4 | 2.0 | 14 | 7.3 |
| Transportation by air | 1,043 | 1,247 | 1,308 | 50 | 4.2 | 41 | 3.6 | 61 | 4.9 |

See footnote at end of table.

**Table 1. Continued—Employees on nonfarm payrolls by industry, seasonally adjusted quarterly averages, 1994–2000**

[Numbers in thousands]

| Industry | Fourth quarter 1994 | Fourth quarter 1999 | Fourth quarter 2000 | Change, fourth quarter to fourth quarter | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 1998 to 1999 | | Average, 1995 to 1999 | | 1999 to 2000 | |
| | | | | Thousands | Percent | Thousands | Percent | Thousands | Percent |
| Pipelines, except natural gas | 16 | 13 | 12 | –1 | –7.1 | –1 | –4.1 | –1 | –7.7 |
| Transportation services | 388 | 465 | 476 | 6 | 1.3 | 15 | 3.7 | 11 | 2.4 |
| Communications and public utilities | 2,230 | 2,444 | 2,498 | 79 | 3.3 | 43 | 1.8 | 54 | 2.2 |
| Communications | 1,306 | 1,580 | 1,645 | 79 | 5.3 | 55 | 3.9 | 65 | 4.1 |
| Electric, gas, and sanitary services | 924 | 863 | 853 | –1 | –.1 | –12 | –1.4 | –10 | –1.2 |
| Wholesale trade | 6,261 | 6,988 | 7,091 | 153 | 2.2 | 145 | 2.2 | 103 | 1.5 |
| Durable goods | 3,625 | 4,164 | 4,207 | 92 | 2.3 | 108 | 2.8 | 43 | 1.0 |
| Nondurable goods | 2,636 | 2,824 | 2,884 | 62 | 2.2 | 38 | 1.4 | 60 | 2.1 |
| Retail trade | 20,827 | 22,897 | 23,220 | 434 | 1.9 | 414 | 1.9 | 323 | 1.4 |
| Building materials and garden supplies | 855 | 1,008 | 1,020 | 46 | 4.8 | 31 | 3.3 | 12 | 1.2 |
| General merchandise stores | 2,650 | 2,757 | 2,752 | –2 | –.1 | 21 | .8 | –5 | –.2 |
| Department stores | 2,314 | 2,410 | 2,405 | –25 | –1.0 | 19 | .8 | –5 | –.2 |
| Food stores | 3,310 | 3,498 | 3,521 | 7 | .2 | 38 | 1.1 | 23 | .7 |
| Automotive dealers and service stations | 2,151 | 2,381 | 2,430 | 36 | 1.5 | 46 | 2.1 | 49 | 2.1 |
| New and used car dealers | 981 | 1,092 | 1,121 | 38 | 3.6 | 22 | 2.2 | 29 | 2.7 |
| Apparel and accessory stores | 1,147 | 1,186 | 1,208 | 46 | 4.0 | 8 | .7 | 22 | 1.9 |
| Furniture and home furnishings stores | 921 | 1,094 | 1,129 | 51 | 4.9 | 35 | 3.5 | 35 | 3.2 |
| Eating and drinking places | 7,173 | 7,967 | 8,096 | 131 | 1.7 | 159 | 2.1 | 129 | 1.6 |
| Miscellaneous retail establishments | 2,620 | 3,006 | 3,065 | 118 | 4.1 | 77 | 2.8 | 59 | 2.0 |
| Finance, insurance, and real estate | 6,851 | 7,605 | 7,649 | 125 | 1.7 | 151 | 2.1 | 44 | .6 |
| Finance | 3,265 | 3,707 | 3,742 | 64 | 1.8 | 88 | 2.6 | 35 | .9 |
| Depository institutions | 2,051 | 2,061 | 2,035 | 8 | .4 | 2 | .1 | –26 | –1.3 |
| Commercial banks | 1,479 | 1,473 | 1,446 | –1 | –.1 | –1 | –.1 | –27 | –1.8 |
| Savings institutions | 292 | 249 | 237 | –5 | –2.0 | –9 | –3.1 | –12 | –4.8 |
| Nondepository institutions | 468 | 705 | 690 | 13 | 1.9 | 47 | 8.5 | –15 | –2.1 |
| Security and commodity brokers | 522 | 708 | 768 | 45 | 6.8 | 37 | 6.3 | 60 | 8.5 |
| Holding and other investment offices | 224 | 233 | 249 | –2 | –.9 | 2 | .8 | 16 | 6.9 |
| Insurance | 2,230 | 2,377 | 2,360 | 22 | .9 | 29 | 1.3 | –17 | –.7 |
| Insurance carriers | 1,542 | 1,610 | 1,585 | 5 | .3 | 14 | .9 | –25 | –1.6 |
| Insurance agents, brokers, and service | 687 | 767 | 775 | 17 | 2.3 | 16 | 2.2 | 8 | 1.0 |
| Real estate | 1,357 | 1,521 | 1,547 | 40 | 2.7 | 33 | 2.3 | 26 | 1.7 |
| Services[1] | 32,218 | 39,598 | 40,768 | 1,525 | 4.0 | 1,476 | 4.2 | 1,170 | 3.0 |
| Agricultural services | 576 | 779 | 808 | 47 | 6.4 | 41 | 6.2 | 29 | 3.7 |
| Hotels and other lodging places | 1,639 | 1,866 | 1,934 | 56 | 3.1 | 45 | 2.6 | 68 | 3.6 |
| Personal services | 1,146 | 1,252 | 1,287 | 40 | 3.3 | 21 | 1.8 | 35 | 2.8 |
| Business services[1] | 6,532 | 9,502 | 9,815 | 660 | 7.5 | 594 | 7.8 | 313 | 3.3 |
| Services to buildings | 872 | 997 | 1,005 | 37 | 3.9 | 25 | 2.7 | 8 | .8 |
| Personnel supply services | 2,397 | 3,731 | 3,830 | 364 | 10.8 | 267 | 9.3 | 99 | 2.7 |
| Help supply services | 2,129 | 3,343 | 3,407 | 330 | 11.0 | 243 | 9.4 | 64 | 1.9 |
| Computer and data processing services | 1,000 | 1,881 | 1,979 | 172 | 10.1 | 176 | 13.5 | 98 | 5.2 |
| Auto repair, services, and parking | 989 | 1,191 | 1,209 | 30 | 2.6 | 40 | 3.8 | 18 | 1.5 |
| Miscellaneous repair services | 346 | 380 | 385 | 4 | 1.1 | 7 | 1.9 | 5 | 1.3 |
| Motion pictures | 456 | 624 | 633 | 43 | 7.4 | 34 | 6.5 | 9 | 1.4 |
| Amusement and recreation services | 1,354 | 1,698 | 1,794 | 74 | 4.6 | 69 | 4.6 | 96 | 5.7 |

See footnote at end of table.

**Table 1. Continued—Employees on nonfarm payrolls by industry, seasonally adjusted quarterly averages, 1994–2000**

[Numbers in thousands]

| Industry | Fourth quarter 1994 | Fourth quarter 1999 | Fourth quarter 2000 | Change, fourth quarter to fourth quarter | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | | | | 1998 to 1999 | | Average, 1995 to 1999 | | 1999 to 2000 | |
| | | | | Thousands | Percent | Thousands | Percent | Thousands | Percent |
| Health services[1] | 9,079 | 10,040 | 10,209 | 133 | 1.3 | 192 | 2.0 | 169 | 1.7 |
| Offices and clinics of medical doctors | 1,567 | 1,898 | 1,953 | 63 | 3.4 | 66 | 3.9 | 55 | 2.9 |
| Nursing and personal care facilities | 1,664 | 1,786 | 1,794 | 8 | .4 | 24 | 1.4 | 8 | .4 |
| Hospitals | 3,760 | 3,994 | 4,044 | 35 | .9 | 47 | 1.2 | 50 | 1.3 |
| Home health care services | 588 | 637 | 644 | -5 | –.8 | 10 | 1.6 | 7 | 1.1 |
| Legal services | 924 | 1,005 | 1,015 | 21 | 2.1 | 16 | 1.7 | 10 | 1.0 |
| Private schools and other educational services | 1,906 | 2,304 | 2,372 | 88 | 4.0 | 80 | 3.9 | 68 | 3.0 |
| Social services[1] | 2,265 | 2,866 | 3,035 | 166 | 6.1 | 120 | 4.8 | 169 | 5.9 |
| Child day care services | 541 | 719 | 788 | 70 | 10.8 | 36 | 5.9 | 69 | 9.6 |
| Residential care | 621 | 795 | 840 | 42 | 5.6 | 35 | 5.1 | 45 | 5.7 |
| Museums and botanical and zoological gardens | 79 | 99 | 104 | 4 | 4.2 | 4 | 4.6 | 5 | 5.1 |
| Membership organizations | 2,112 | 2,434 | 2,450 | 34 | 1.4 | 64 | 2.9 | 16 | .7 |
| Engineering and management services[1] | 2,633 | 3,312 | 3,474 | 138 | 4.3 | 136 | 4.7 | 162 | 4.9 |
| Engineering and architectural services | 794 | 969 | 1,019 | 44 | 4.8 | 35 | 4.1 | 50 | 5.2 |
| Management and public relations | 743 | 1,060 | 1,134 | 51 | 5.1 | 63 | 7.4 | 74 | 7.0 |
| Government | 19,219 | 20,276 | 20,448 | 325 | 1.6 | 211 | 1.1 | 172 | .8 |
| Federal | 2,854 | 2,646 | 2,615 | –65 | –2.4 | –42 | –1.5 | –31 | –1.2 |
| Federal, except Postal Service | 2,024 | 1,780 | 1,761 | –52 | –2.8 | -49 | –2.5 | -19 | –1.1 |
| State government | 4,624 | 4,724 | 4,759 | 83 | 1.8 | 20 | .4 | 35 | .7 |
| State government, except education | 2,717 | 2,743 | 2,771 | 40 | 1.5 | 5 | .2 | 28 | 1.0 |
| State government education | 1,907 | 1,981 | 1,989 | 43 | 2.2 | 15 | .8 | 8 | .4 |
| Local government | 11,741 | 12,905 | 13,073 | 306 | 2.4 | 233 | 1.9 | 168 | 1.3 |
| Local government, except education | 5,220 | 5,581 | 5,686 | 117 | 2.1 | 72 | 1.3 | 105 | 1.9 |
| Local government education | 6,521 | 7,325 | 7,387 | 190 | 2.7 | 161 | 2.4 | 62 | .8 |

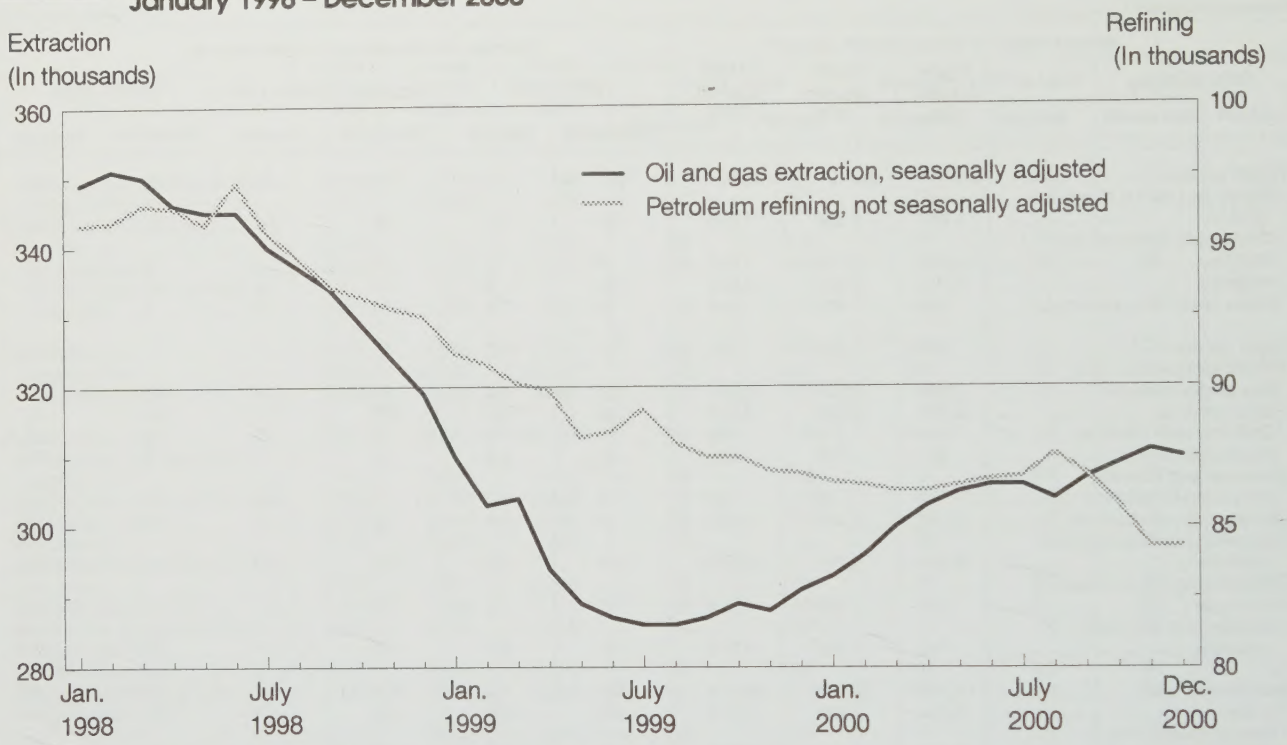
[1]Includes other industries not shown separately.

keep consumers away from new cars and light trucks.[11] Americans beat 1999's sales record by purchasing 17.4 million vehicles.[12] Moreover, consumers' appetite for less fuel-efficient trucks and sport utility vehicles (SUVs) did not seem to be affected at all. For the 2000 model year, sales of pickup trucks remained very high, and for the first time ever, SUVs beat pickup trucks in sales.[13]

Employment in *motor vehicles and equipment* manufacturing reflected that intensity during the first half of the year, but it plummeted in summer. Overall, motor vehicle manufacturers reduced their payrolls by 34,000 jobs last year. Part of the decline reflected the expanding competition from import cars and, especially, light trucks. Domestic manufacturers resorted to hefty incentives to move certain poor-selling, year-2000 models; indeed, the CPI for new cars and trucks was about unchanged over the year. Although those programs "moved the metal," they also dragged down profits, which led some companies to curtail production and employment. Yet, the real drag on motor vehicle employment came not from cars and light trucks, but rather from the heavyweights of the motor vehicle industry—heavy trucks and motor homes.

While rising fuel prices did not appear to adversely affect consumers' demand for light trucks, rising diesel prices did have a wide range of effects on the trucking industry. Intense competition among trucking companies made it difficult for firms, especially the smallest ones, to pass on the climbing fuel costs to their customers in the form of fuel surcharges. Indeed, the Producer Price Index (PPI) for motor freight transportation and warehousing increased by only 4.9 percent over the year, versus the 23.8-percent jump in retail on-highway diesel prices. At the same time, interest rates, insurance payments, and the cost of recruiting long-haul drivers also pushed costs upwards, while a decline in truck tonnage cut into revenues.[14] Together, these factors dramatically slowed, but did not stop, hiring in *trucking and warehousing*. (See chart 2.) The industry added 25,000 workers last year, its weakest hiring level since 1992.

**Chart 1. Employment in oil and gas extraction and petroleum refining, January 1998 – December 2000**




SOURCE: Bureau of Labor Statistics, Current Employment Statistics survey.

Not only did trucking firms cut back on hiring, but they also dramatically reduced their orders for new rigs. These cutbacks came on the heels of 2 years of record sales, but the increasing costs and lower demand for freight transport hastened an anticipated pullback in sales.[15] As a result, sales of the biggest rigs plunged 20 percent from their 1999 level.[16] Employment in truck tractor manufacturing took a similar turn. As a whole, employment declines among truck tractor manufacturers accounted for more than one-quarter of the job losses in motor vehicle manufacturing and also contributed to declines in *motor vehicle parts*.[17] Employment in *truck and bus bodies* and *truck trailers* showed weaknesses as well. Both had shown strong job growth in 1999, but employment in truck and bus bodies was unchanged in 2000, while truck trailers lost 7,000 jobs; a 16-percent decline.

Motor home manufacturing paralleled the decline in heavy trucks. As fuel prices surged, the cost of traveling in motor homes rose. Interest rates also entered into the equation both for consumers and dealers. Since dealers generally finance their inventories, higher interest rates and falling sales pushed up their inventory carrying costs. As much as higher diesel prices tied together the fortunes of recreational vehicles (RVs) and heavy trucks, higher interest rates tied together the fortunes of these residences on wheels and of fixed residences, in other words, residential construction.

***During the first part of the year, the Federal Reserve continued to raise interest rates.[18] Construction was one area that was affected.*** *For the year, the construction industry added about 223,000 jobs, a 33-percent drop from 1999's gains. Although declining mortgage rates in the second half of the year sparked some late-year hiring, this renewed strength was not sufficient to compensate for sluggish summer hiring.*

In terms of real value put-in-place, residential construction activity decreased slightly in 2000, a marked pause after 1999's 6-percent growth.[19] Slower home building translated into more moderate hiring in *residential building construction*. Employment in this industry expanded by 30,000 in 2000, a 42-percent reduction from its 1999 increase. Hiring in *special trade contractors* diminished as well, totaling 165,000 last year, versus 254,000 in 1999. The value of public construction projects, though perhaps less sensitive to interest rate fluctuations, also moderated in 2000, as its growth notched down from 4 percent in 1999 to 2 percent in 2000. That decline made its mark on *heavy construction*, which added only 5,000 workers, versus 18,000 in 1999. Yet, even as residential and public construction subsided, private nonresidential work expanded, with its real value put-in-place increasing by 7 percent or $12.0 billion. Employment in nonresidential building construction did reflect this one area of strength, as it grew by 21,000, and exceeded its prior 5-year average annual gains of 16,000. In

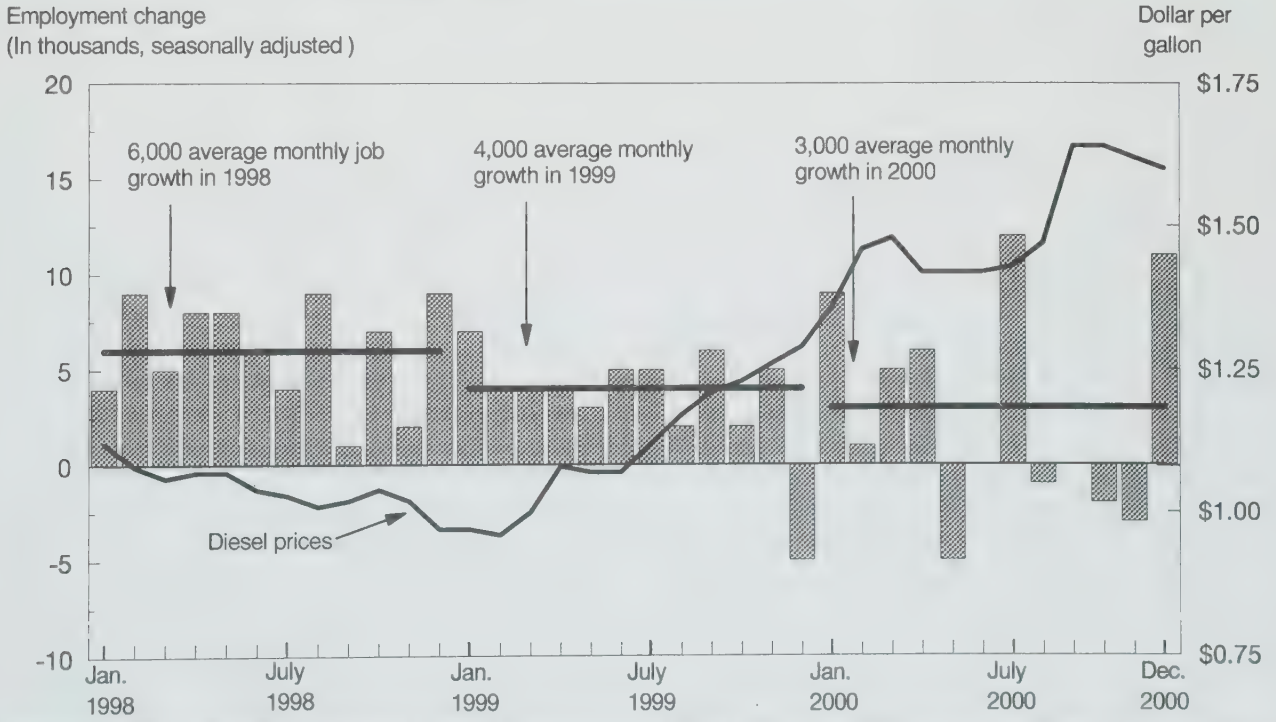
short, as residential and building activity slackened, so did the employment growth in construction, and this weakening was only partially offset by strength in nonresidential construction.[20]

*Real estate*, like construction, sandwiched a weak spring and summer between strong hiring early and late in the year—thus reflecting the rise and fall in mortgage rates. Overall, employment grew by 26,000, a substantial slowdown from 1999's increase of 40,000. Mortgage rates also made a visible mark on employment in *mortgage banks and brokerages* (part of the *finance* industry), where the number of jobs slid by 21,000. Layoffs resulted from the sharp decline in mortgage refinancing. The value of refinance applications fell from 54 percent of total mortgage applications in the first quarter of 1999 to 17 percent in the third quarter of 2000.[21] That decline occurred while sales of new and existing homes fell only slightly.

The slowdown in residential construction was mild, compared with the decline in manufactured homes. Shipments from January to October 2000 plummeted 26.0 percent, with respect to the same period in 1999. Loans for manufactured homes fall within the subprime lending market, which charges higher rates than conventional mortgages. Buyers of these homes tend to have relatively low incomes. As a result, rising interest rates, together with tightening credit standards, hurt sales of manufactured homes particularly. Declining sales and rising inventories led the industry to cut production and employment.[22] Job losses in *wood buildings and mobile homes* totaled 13,000, accounting for more than half the decline in *lumber and wood products* manufacturing.

At first, the remaining job losses in *lumber and wood products* seem to reflect the general slowing in residential construction. Indeed, demand for all construction supplies and materials peaked in March, and both domestic new orders and shipments decreased subsequently.[23] This decline in orders contrasts sharply with the prior year's high demand for construction supplies and the resulting reports of building material shortages.[24] Yet, the employment declines that appeared in *lumber and wood products*, and in *primary metals*, (two industries closely tied to construction) reflected not only the weak demand for wood and steel, but also the particularly weak demand for U.S.-produced wood and steel; for while their domestic output dropped, lumber imports remained steady, and primary metal imports sprang upwards.[25] In terms of employment, other construction-related manufacturing industries did not show as much weakening as lumber and primary metals. Indeed, employment in *stone, clay, and glass products* declined by only 2,000, after having been unchanged in 1999.

**Chart 2. Over-the-month changes in trucking employment and on-highway diesel prices, January 1998 – December 2000**




SOURCE: Employment data are from the Bureau of Labor Statistics, Current Employment Statistics survey; diesel prices are from the U.S. Department of Energy, Energy Information Agency.

As home sales moderated, so did the growth in the demand for furniture, appliances, and landscaping. Employment growth in *landscaping and horticultural services* fell to about one-third its 1999 rate. The "do-it-yourself" side of this market also weakened as sales growth in *building materials and garden supplies* stores slowed to 3.0 percent, versus 10.6 percent in 1999.[26] The industry's employment trend matched that weakening as its rate of expansion declined from 4.8 percent in 1999 to 1.2 percent, with just 12,000 jobs added in 2000. The story was similar for *furniture and fixtures*, with both manufacturers and retailers sharply cutting their prior year's rate of job growth. As for *household appliances* manufacturing, employment slipped by 6,000 in 2000, after having risen by 3,000 the year before.

Aside from construction, real estate, and their related industries, the other industries most directly affected by increasing interest rates were in *finance*. Although cross-industry mergers may have provoked some layoffs in these industries, their employment picture turned gray only once interest rates began their ascent. Such was the case with *depository institutions* as well, in which employment plummeted by 26,000, thus erasing its growth of the prior 2 years.

Rising interest rates also affected the stock market, indirectly. Concern about the direction of the economy and the ability of companies to post strong profits as operating costs rose contributed to large swings in stock prices and high volumes of daily trading. Although the market in no way matched 1999's boom, the high trading volumes and record profits at brokerages spurred *security and commodity brokers* to expand their ranks by 60,000—a notable hiring pace even for an industry that added 37,000 workers a year, on average, between 1994 and 1999.[27]

***Increasing international trade affected several manufacturing industries.*** *Aircraft and textiles saw their job losses diminish as they benefited from improving foreign demand. In contrast, rising imports contributed to employment declines in logging, primary metals, and apparel.*

Steel imports, particularly from the Ukraine, China, and India, surged 9.1 percent last year, as the U.S. dollar gained strength against foreign currencies.[28] These elements—along with the world steel industry's overcapacity—hurt domestic producers, as *primary metals industries* cut 11,000 workers from payrolls last year.[29] Although that employment decline about matched the 10,000 drop in 1999, their similarity merely reflects the passing improvement in this industry in late 1999 and early 2000. During that period, steel prices rose and brought production and employment levels up also. Yet, these gains were short-lived, as prices slid midyear and the job losses resumed.[30]

In the *logging* industry, imports from January to November 2000 rose 30.7 percent, compared with the same period in 1999, even while residential construction slowed.[31] Those two factors contributed to the 5,000 workers cut from logging payrolls last year. This is a change from the normal pattern. Trade has traditionally favored logging, which maintained a trade surplus and relatively steady payrolls throughout the 1990s.

*Apparel*, by contrast, has suffered from rising trade deficits and falling employment during most of that period. In 2000, apparel's job losses totaled 44,000. Although that decline was markedly milder than the 64,000 jobs shed in 1999, it represented the largest job losses among nondurable goods manufacturing last year.[32] Indeed, from 1994 to 1999, apparel employment plunged by nearly one-third, or 304,000. Increasing imports pushed the industry's trade deficit up 17.3 percent between January and November 2000, with respect to the same period in 1999.

Unlike apparel, the *textile* industry benefited from actual gains in international trade last year. Exports increased to the Americas and, to a lesser extent, Asia, and probably helped slow the shedding of textiles jobs.[33] Through November 2000, exports of fabric and yarn grew about 18 percent, with respect to the same period in 1999. Fabric even achieved a slight trade surplus.[34] Trade legislation that passed last year created incentives for fabric and yarn exports to several regions.[35] In spite of the improvements in exports, *textile* employment continued to fall. Its 20,000 decline, however, was mild, compared with the 34,000 drop in 1999. Furthermore, last year's job losses were concentrated in only three industries: *knitting mills*; *textile finishing, except wool*; and *carpets and rugs* (for which losses were related to the slowdown in residential construction). In prior years, however, the declines tended to be more widespread—much like they continue to be in the apparel industry.[36]

U.S. trade with Asia benefited not only the textiles industry, but also the *aircraft* industry. Asia's 1997 financial crisis had hurt U.S. aerospace manufacturers significantly, as Asian airlines delayed or canceled orders. In 2000, however, U.S. manufacturers' aircraft order books filled up again, thanks partly to Asia's improving economies, which spurred renewed orders for commercial aircraft.[37] U.S. carriers also contributed important bookings, and so unfilled orders for aircraft and parts reached their highest levels since 1998.[38] As the backlog of orders increased, the aircraft industry's job losses abated. For the year, employment fell by 18,000 jobs, or about one-third its 1999 decline, with most of the declines coming in the first half of the year. Data on aircraft's average workweek provide another sign of the industry's improvement. The average of total weekly paid work hours, as well as those that are overtime hours, rose throughout the year for total gains of 1.1 and 1.6 hours, respectively. Nonetheless, they still remained below their 1997 levels, that is, below their levels prior to the recession that affected many Asian economies.

***Legislative changes factored into the employment developments in health services and social services—industries in***

***which employment is closely tied to demographics and government funding.*** *Within health services, home health care services and hospitals benefited from the implementation of (separate) medicare prospective payment systems. The transition from the Job Training Partnership Act to the Workforce Investment Act shifted the seasonal hiring patterns in State, local, and private social services.*

Higher medicare payments coincided with renewed hiring in the home health care industry. Home health's Prospective Payment System marked the end of the Interim Payment System mandated by the 1997 Balanced Budget Act. Announced in late June and effective October 1, 2000, the medicare prospective payment system reimburses home health agencies by a predetermined amount per 60-day treatment "episodes," and the reimbursement is adjusted for the level of patient care and regional wage differences.[39]

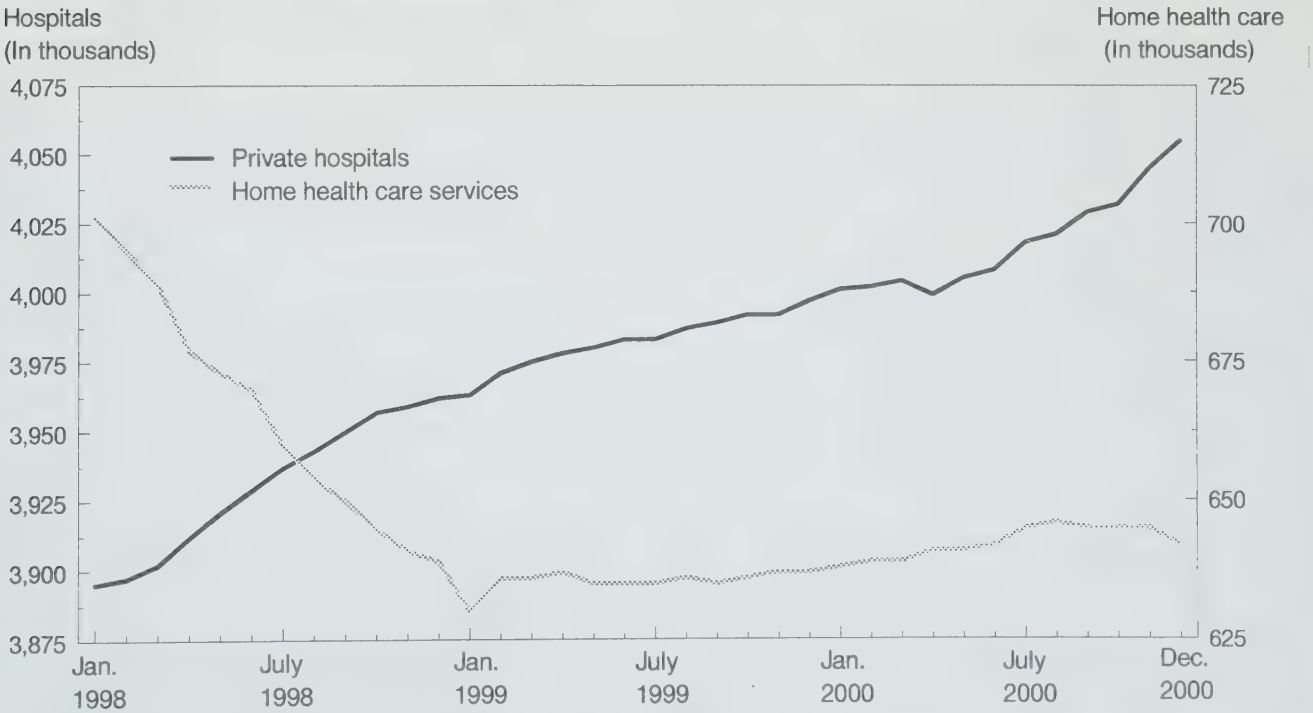
The move to the prospective payment system was the second significant funding increase for home health agencies since the cutbacks mandated by 1997's Balanced Budget Act. The first increase had come with the November 1999 passage of the Balanced Budget Refinement Act, which partially restored funding that had been cut under the Balanced Budget Act.[40] As chart 3 illustrates, the moderate recovery in *home health care* employment began about when the 1999 Balanced Budget Refinement Act was passed. As further reimbursement increases were provided in the prospective payment system, providers expanded their staffs last year by 7,000. This gain represented a modest recovery after the industry had lost 68,000 jobs in 1998 and another 5,000 in 1999.

Hospitals also benefited from higher medicare reimbursements in both 1999 (for inpatient services) and 2000 (for outpatient services). Inpatient medicare reimbursements rose under the Balanced Budget Refinement Act of 1999. On August 1, 2000, the hospitals' outpatient prospective payment system took effect, and, like its home health care cousin, it was expected to result in increased medicare reimbursements.[41]

The impact of higher medicare payments on employment was not as clear in hospitals as in home health care, possibly because of factors such as decreased managed care and other private sector payments, which hurt hospital operating margins through 1999.[42] Reports covering last year indicated that hospital profits began to recover to some extent.[43] *Private hospitals* kept expanding their payrolls last year, with employment rising by 50,000. That pace topped 1999's increase of 35,000 jobs, as well as surpassing the industry's annual average gains between 1994 and 1998. In contrast to private hospitals, *local government hospitals* had lost jobs each year from 1994 through 1998, and then added 4,000 workers in 1999 and 13,000 in 2000.

Social services also were affected by legislative changes in 2000. The transition from the Job Training Partnership Act

**Chart 3. Employment in hospitals and home health care services, seasonally adjusted, January 1998 – December 2000**




SOURCE: Bureau of Labor Statistics, Current Employment Statistics survey.

(JTPA) to the Workforce Investment Act affected the typical summer hiring patterns in *private, State,* and *local social services*, although it is unlikely that the new legislation affected annual employment growth rates. Historically, the JTPA's summer programs provided for about 8 weeks of part-time employment for youth, who worked in government or private, nonprofit agencies. Under the Workforce Investment Act (passed on August 7, 1998 and implemented in 2000), the summer youth program was integrated into the general youth services, which focus on a full year of training and activities, and not just summer employment.[44] In addition, not all States had completed their transition by summer, which delayed the funding and implementation of the new program even as the JTPA program funding had expired.[45] Even States that were prepared for the transition provided jobs for fewer youth, because the full-year focus of the Workforce Investment Act required greater funding per participant, although its budget did not rise.[46] These factors translated into greatly reduced summer hiring in private, State, and local social services—the industries in which employment of youth under JTPA had been concentrated.

Although summer hiring fell, the overall employment trends in these industries remained constant. In 2000, private social services employment grew by 169,000, or 6 percent, thus matching its 1999 growth rate. Employment in State social services was unchanged in 2000, as in 1999, while local social services added 4,000 workers.

***Information technology (IT) has created thousands of jobs, but not all IT-related industries benefited during 2000.*** *In general, industries dealing with semiconductors showed the strongest gains while growth in computer manufacturing and trade faltered.*

The broadening scope of IT had mixed employment effects in 2000. Employment in semiconductor manufacturing and trade rose precisely because of the ever-widening range and sophistication of products incorporating information technology. At the same time, the most "classic" instrument of IT, the personal computer, showed signs of becoming a mature industry, as business and consumer PC sales dropped.[47] Overall computer production did grow, but remained well below capacity, and employment in the industry declined. Employment related to the wholesale and retail sale of computers weakened. In short, "information technology" connections did not necessarily translate into exceptional employment growth in 2000.

Last year, employment in *electronic components and accessories*—primarily, the semiconductor industry—surged by 54,000. As the year progressed, industry news increasingly announced a slowdown in semiconductor sales, and cited a possible production overcapacity. Slowing demand, however, did not imply weak demand; indeed, the book-to-bill ratio, which compares orders to shipments, spent much of the year above 1999's level.[48] Instead of slowing, hiring accelerated during the year.

Other manufacturers of IT equipment also hired additional staff, albeit at a much slower pace than semiconductors. *Communications equipment* added 7,000 workers, mostly in *telephone and telegraph apparatus* and *radio and television and communications equipment.* The former produces equipment used to provide land wiring for the Internet; the latter produces cellular telephones.

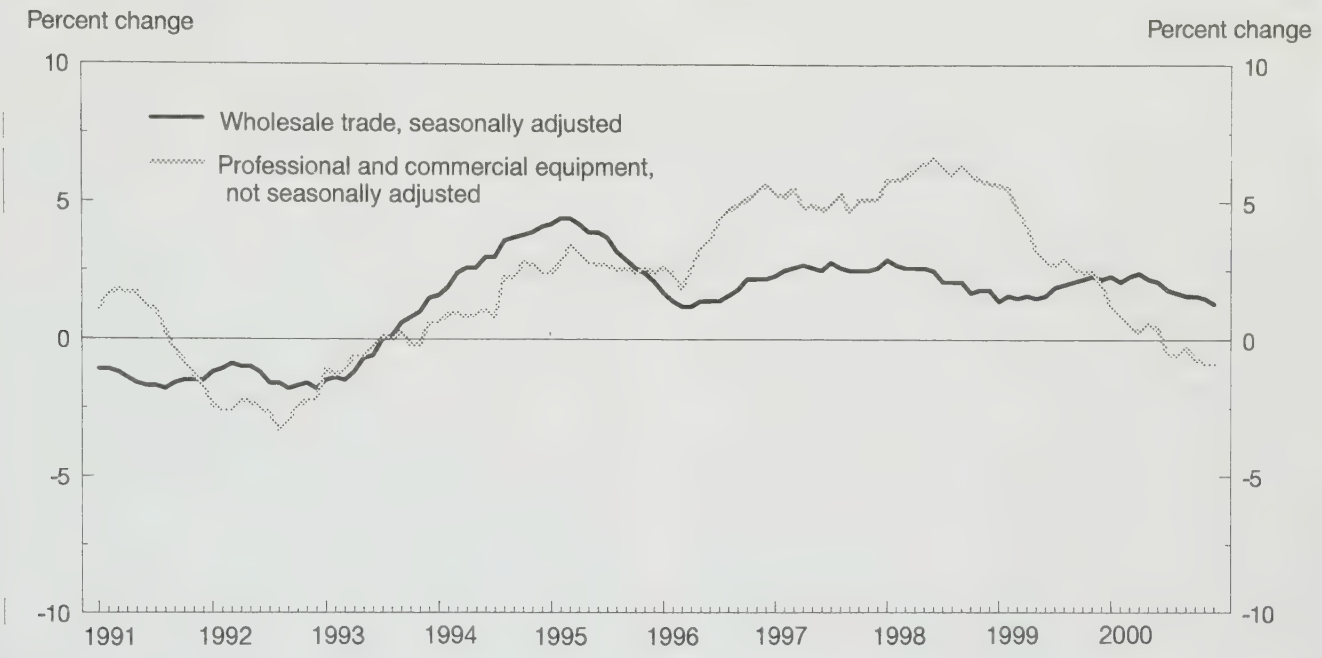
*Industrial machinery*, which includes computers, also partially played a role in IT-related manufacturing, although its role did not translate into job growth. While production and exports of *computers and office equipment* maintained their ascent last year, the industry's work force shrank by 8,000. Both semiconductor and computer manufacturers enjoyed extraordinary productivity gains in the 1990s.[49] One key difference between them—which underscores the strength in product demand in the semiconductor industry, compared with computer manufacturing—was that semiconductor plants operated most of 2000 at or near their reported peak capacity, whereas computer plants operated at about 80 percent capacity.[50] Acceleration or deceleration in employment growth in semiconductors consistently precedes similar changes in the industry's production capacity, and that was likely the case last year, as this industry accelerated its hiring even after its plants reached their estimated peak output levels.[51]

By cutting jobs, computers and office equipment acted practically alone among IT-related manufacturers. In contrast, *special industrial machinery* and *miscellaneous industrial and commercial machinery* each brought on 5,000 workers. As a whole, these industries may have benefited from semiconductor industry's acute need to expand, and thus purchase industrial equipment.[52]

Computer manufacturing demonstrates that not all IT industries stood out in terms of job growth. The IT-related parts of *wholesale* and *retail trade* provided even more evidence. (See charts 4 and 5.) In 2000, *professional and commercial equipment* distribution (which includes computers) cut 8,000 jobs after having brought on 22,000 in 1999, and thus accounting for some of the slowdown in wholesale trade. Employment growth, however, continued in *electrical goods* distribution. Riding the strength of semiconductor trade, electrical goods wholesalers brought on 24,000 workers, thus exceeding their prior 5-year average yearly gains of 18,000.

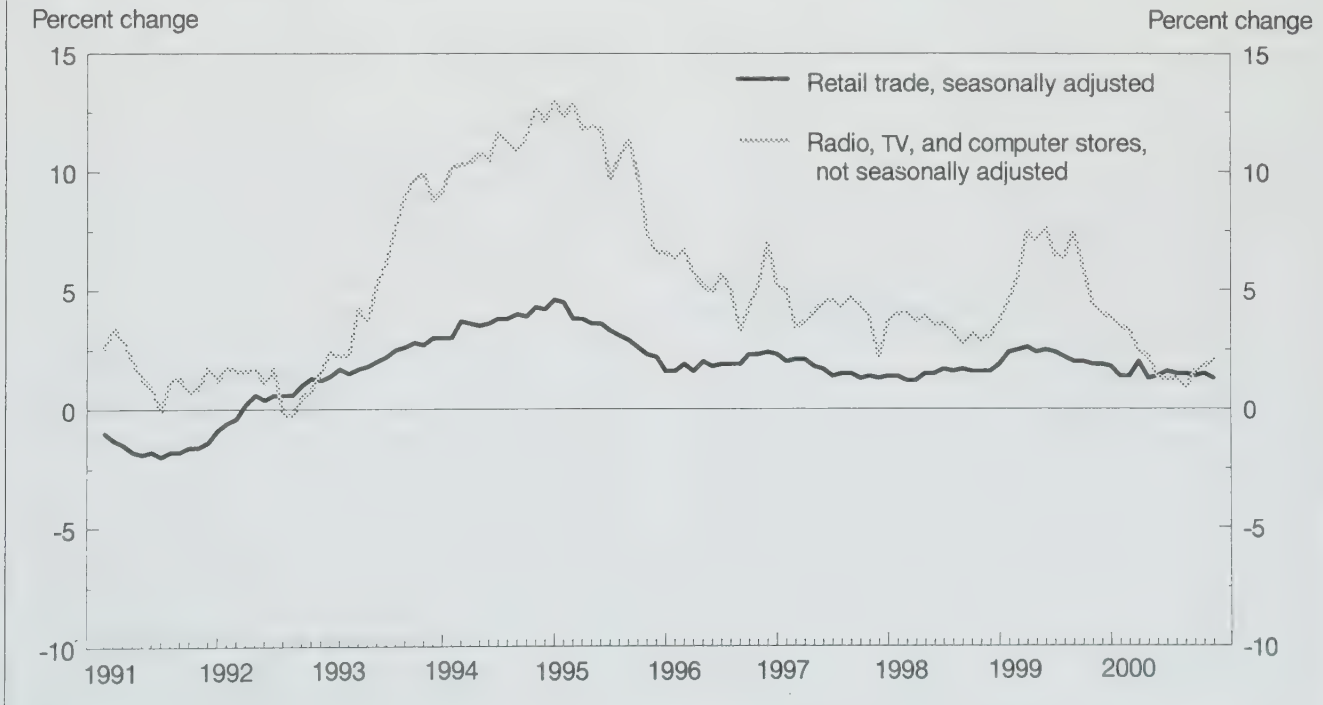
The only distinguishable IT component of retail trade is *radio, TV, and computer stores*. Between 1994 and 1999, employment in these stores had surged by about 5 percent annually, consistently above retail trade as a whole. In 2000, however, that difference disappeared, as their growth rate dropped to about 1.8 percent. Although last year's declining computer sales would have hurt these stores, sales of other consumer electronics increased by 14 percent.[53] Outside competition probably best explains the employment slowdown in radio, TV,

**Chart 4.** Information technology in wholesale trade, over-the-year percent change in employment, 1991–2000




SOURCE: Bureau of Labor Statistics, Current Employment Statistics survey.

**Chart 5.** Information technology in retail trade, over-the-year percent change in employment, 1991–2000




SOURCE: Bureau of Labor Statistics, Current Employment Statistics survey.

and computer stores. Part of it came from discount department stores, which increasingly used electronics promotions to get customers in the door.[54] Further competition came through the Internet, especially from computer companies that sell their wares online.[55]

Like semiconductors in manufacturing, software was a pillar of employment growth among IT-related computer service industries in 2000. *Prepackaged software* brought on 39,000 workers, thus equaling its 1999 expansion. Other computer service industries, such as programming, information retrieval, data processing, and consulting, did not fare as well, with employment growth plummeting in many industries from their 1999 rates. Demand for some IT services may have slackened as work to ready systems for Y2K was completed. Nonetheless, it is also likely that computer services may have been constrained less by demand than by the supply of labor.

***Did labor shortages contribute to a slowdown in job growth in some industries?*** *Last year, total nonfarm payrolls expanded by 2.1 million jobs, or 1.6 percent, an impressive figure, but the weakest seen since 1992. The general economic factors already presented certainly justify the reduced hiring in many industries. Unemployment, nonetheless, remained low throughout the year, and anecdotal evidence suggested that some firms still had trouble recruiting.*[56] *So, the question emerges whether the slowdown was partly caused by a labor shortage.*

What (indirect) evidence of shortages, then, can data from the establishment survey provide?[57] At first look, it seems implausible that *business services* would have suffered from recruiting difficulties. In 2000, business services once again added more jobs than any other industry, its payrolls expanding by 313,000 workers.[58] Yet, its growth rate sank more than most industries and reached its lowest level since the 1991 recession. Within business services, *personnel supply services* (which includes *help supply services*) and *computer and data processing services* experienced sharp slowdowns. Job growth in personnel supply slid from 11 percent in 1999 to 3 percent in 2000; in computer services, it dropped from 10 percent to 5 percent. General economic factors—such as higher interest rates and energy prices—certainly entered into the equation, particularly in personnel supply services, which cut 39,000 jobs in the fourth quarter. Revenues of temporary help agencies, as measured by sales of their services, saw their smallest percentage growth since the 1991 recession, although they had begun to cool in 1999.[59] But was this slowdown due to less demand for temporary staff or a shortage of workers to fill positions?

Anecdotal evidence continued to point to the difficulties temporary help firms had in recruiting.[60] Hiring less-skilled workers may not be an option for temporary staffing firms, which instead have witnessed the rise of the "portfolio workers," independent professionals employed through staffing services.[61] That shifting demand toward higher-skilled workers may be leading firms into a "war for talent," in which the weapons include training, health insurance, paid vacations, and money.[62] Average hourly earnings growth in *help supply services* reached about 6.8 percent in 2000, after having increased 3.4 percent in 1999; for all services industries, earnings growth reached 4.4 percent, up from 3.7 percent in 1999. Help supply earnings remain, on average, relatively low, in spite of their rapid rate of growth. The same cannot be said for *computer and data processing services*, where earnings topped $23 an hour, growing by 4.4 percent last year. Thus, there is some evidence from both help supply and computer services that worker shortages have served to bid up wages.

*Engineering and management services* also requires a skilled work force, but unlike business services, its 4.9-percent rate of job growth exceeded 1999's rate. Furthermore, any recruiting troubles this industry may have had did not translate into higher pay. Indeed, earnings growth in engineering and management services decelerated to the point of falling below the rate of inflation.

Although residential building slowed last year, worker shortages still affected *construction*. Their influence, however, is unclear, and their effects may be offsetting. On the one hand, some firms that normally would have laid off employees when demand began to slacken decided instead to retain workers so they would be available when demand improved. On the other hand, those firms that wished to expand may have been constrained from hiring as many workers as necessary. Unlike business services, construction companies can, and have, resorted to filling some posts with less skilled workers than those traditionally recruited.[63] Such a "deskilling" of the construction work force could help hold down the earnings growth of construction workers, but that did not appear to take place last year. Earnings growth accelerated to 3.9 percent over the year, with higher growth rates throughout the year, compared with 1999. In short, construction, like business services, dealt with moderating employment growth, but accelerating wage gains.

Recruiting troubles are not necessarily restricted to industries in expansion. Just as these troubles may have diminished hiring in construction and business services, they may have led some *manufacturing* industries to diminish their layoffs. When needing to increase production, manufacturers have traditionally used overtime before hiring additional workers. Last year, however, the flip side of this story unfolded. Coinciding with renewed layoffs, the manufacturing workweek dove to its lowest level since 1992.[64] Furthermore, the industries that reduced their workweek the most tended to be the ones with a higher proportion of skilled production workers—just as they were the ones that increased their use of overtime the most during the post-recession 1990s.[65] The high cost of recruiting and training such workers may have made manufacturers wary to lay them off, especially given any uncertainty about how long any downturn would last,

choosing instead to reduce their work hours.

Although some evidence of skilled labor shortages emerges in construction, business services, and manufacturing, the same is not the case in several industries with a preponderance of low-paid, low-skilled positions. *Hotels, amusement and recreation services*, and *eating and drinking places* generally maintained their hiring pace last year. Rising somewhat from their 1999 growth rates were hotels, where employment rose by 3.6 percent, and amusement and recreation services, where it rose 5.7 percent. Eating and drinking places saw its hiring hold firm at 1.6 percent. Combined employment in these industries expanded by 293,000. Nonetheless, to find these workers, both lodging and dining establishments did have to resort to raising wage rates above 4.2 percent, the wage growth rate for all private industries. Earnings growth for workers in hotels rose to 4.8 percent over the year, versus 3.7 in 1999. In eating and drinking places, earnings growth reached 4.7 percent in 2000, up from 1999's strong 4.3 percent gain.

If a labor shortage were to emerge, it would most like occur during the seasonal hiring period when hundreds of thousands of workers are needed for temporary jobs. To analyze the amount of seasonal hiring that took place in these industries, it is necessary to look at the total change in their not-seasonally-adjusted employment series in the months leading up to the summer. For eating and drinking places, that buildup period lasts from February through June, while for hotels and amusement and recreation services, it lasts from February through July. In the latter industries, 2000's summer buildup surpassed every year of the 1990s. Hotels brought on 326,000 workers; a 14.4-percent increase from their 1999 seasonal hiring, while in amusement and recreation services, 647,000 workers came on board—a 17.4-percent increase. Seasonal hiring for eating and drinking places fell slightly from the levels in 1999, but by very little; it totaled 671,000 workers in 2000, versus 689,000 the year earlier. Although it is impossible to say whether these industries fell short of their seasonal hiring goals, it is clear that, as a group, they were able to exceed their prior years' results—at a cost of having to accept relatively high wage growth.

Anecdotal evidence has suggested that firms across many industries are having to deal with shortages. Employment and earnings data from the establishment survey does provide some indirect, but not conclusive, evidence of labor shortages, particularly of skilled workers, in business services, construction, and manufacturing. Yet, industries that rely on relatively low-skilled help did not appear to end up short-handed in 2000 either for year-round or summer workers, although their relatively high wage growth does indicate that firms did have some difficulty in staffing.

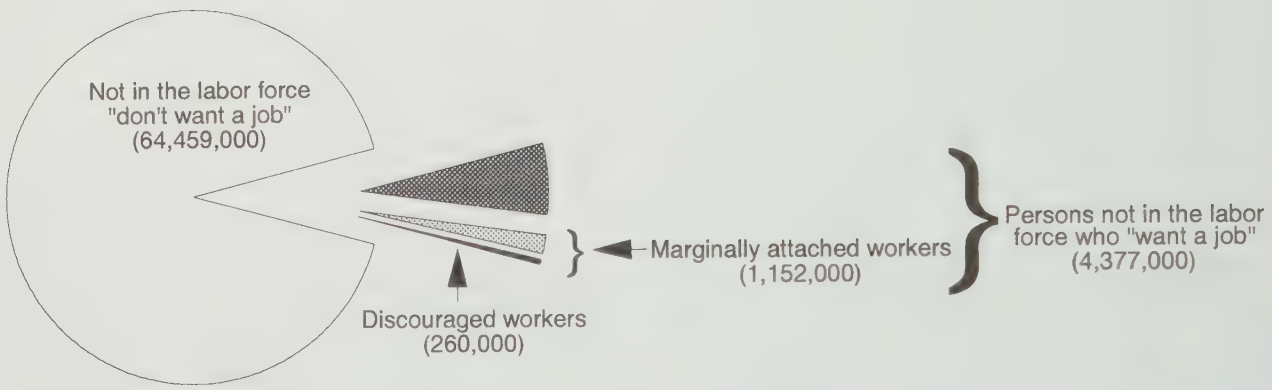
***In recent years, the unemployment rate has been at 3-decade lows and employment has continued to expand, leading economists to look for signs of tightness in the labor market.*** *Concern has arisen as to whether the supply of workers would be adequate to meet growing demand; in fact, the previous section of this article suggests that supply may not have been adequate in certain industries. However, as continued employment growth did not result in accelerated wage gains, questions were once again raised as to where the supply of workers came from over the year. The* CPS *is able to provide information that can be used, in a limited way, as a measure of the potential supply of workers. It is also able to show, to some degree, where the newly employed came from in 2000.*

The CPS provides data that can be used to identify two main groups of potential workers: unemployed individuals and persons not in the labor force who indicate that they currently want a job. There were 5.7 million unemployed persons and 4.4 million who were not in the labor force, but reported that they indeed wanted a job.[66] Of this latter group of persons, 1.2 million reported that they actually searched for work within the past 12 months and were available to take a job if one were offered; this group is often referred to as "marginally attached" to the labor force. Among marginally attached workers, 260,000 had looked for work in the previous 12 months, but were not currently looking,[67] because they believed that no jobs were available for them or that there were none for which they would qualify; this group is known as discouraged workers.[68] (See chart 6.)

Since 1994, the number of persons outside the labor force who want a job has declined by 30 percent.[69] The number who were currently available, and actually looked, for work within 12 months of being surveyed fell by 36 percent. The count of discouraged workers declined even more dramatically, by 48 percent between 1994 and 2000. These numbers suggest that there may have been significant movement into the labor force by those previously not participating.

Other potential sources of labor include persons not in the labor force who report that they do not want a job; an increase in the number of multiple jobholders; and population growth, including persons immigrating to the United States. In 2000, there were 64.5 million persons not in the labor force who, at the time of the survey, indicated that they did not want a job. However, it is possible that certain persons in this group would enter the labor force under the right conditions. For example, a retired 65-year-old who, in 1999, reported that he did not want a job because of concerns that his Social Security benefits would decrease might have changed his mind with the repeal, in 2000, of the Social Security "earnings test."[70] Another example might be a mother who doesn't want a job because she is uncomfortable leaving her children with the child-care providers in her area. If conditions were to change—a trusted relative moved to the area and agreed to watch the children—she may then decide to look for employment. There are countless scenarios in which changing conditions may induce persons to enter the labor force, though previously, they were not interested.

**Chart 6. Persons not in the labor force, annual average, 2000**




NOTE: Persons not in the labor force who "want a job" are neither working nor currently looking for work, but have simply expressed a desire for a job. Marginally attached workers are persons who are not in the labor force, who want and are available for a job, and who have looked for work sometime in the past 12 months (or since the end of their last job if they held one within the past 12 months), but are not currently looking. Discouraged workers are a subset of the marginally attached who are not currently looking for work because they believe that no jobs are available or that there are none for which they would qualify.
SOURCE: Bureau of Labor Statistics, Current Population Survey.

An increase in the number of persons working more than one job could be an additional source of labor. However, in recent years, the number of multiple jobholders has actually declined, from 8.0 million in 1997 to 7.6 million in 2000. Multiple jobholders made up 5.6 percent of all employed persons in 2000, down from 6.2 percent in 1996. There are several possible explanations for the decrease in the number of multiple jobholders. It may be that the strong economy has helped persons who previously worked two part-time jobs find one full-time job. Indeed, the number of persons working two part-time jobs has been on the decline, while full-time employment has grown. It is also reasonable to assume that the strong economy and increased earnings lessened the financial need to moonlight for workers who already had a full-time job.[71]

Persons immigrating to the United States are yet another potential source of labor.[72] In 2000, the foreign-born population was 26.5 million. In recent years, the foreign born have accounted for a disproportionately large share of U.S. population growth. By 2000, the foreign born accounted for 12.5 percent of all employed persons in the U.S.[73] Of the foreign-born population that immigrated to the United States in 1999 and 2000, 57.0 percent (or 966,000) were employed in 2000; this figure tends to rise with the length of stay in the United States.[74]

The labor market is very dynamic, with changes in employment reflecting both changes in population and changes in the proportion of the population that is employed; the latter is largely tied to the performance of the economy. From 1999–2000, the civilian noninstitutional population increased by 2.2 million, and employment grew by about 1.8 million. About 76 percent of net employment growth can be attributed to the growth in population. That is, if the proportion of the population employed had not changed, employment still would have increased by about 1.4 million. However, the percent of the population with jobs increased slightly and that increase accounted for the balance (about 447,000 or 24 percent) of the total change in employment.[75]

***The labor market situation for minority workers improved notably in 2000.*** *Indeed, both blacks and Hispanics managed to slightly close the unemployment rate gap between whites over the year. Employment increases were particularly strong for Hispanics. A summary of the labor market performance of various demographic groups and a review of other aspects of the changing job market provide further insight into the employment situation in 2000.*

The labor market, as depicted by the CPS, was relatively healthy in 2000.[76] The number of employed persons continued to increase (by 1.4 million), though at a slower pace than in 1999.[77] The percentage of the population that was employed (the employment-population ratio) reached a record high of 64.6 percent in the first quarter of 2000 and ended the year at 64.4 percent, in line with 1999 levels. The number of unem-

**Table 2.** Employment status of the civilian noninstitutional population 16 years and older, by selected characteristics, quarterly averages, seasonally adjusted, 1999–2000

[Numbers in thousands]

| Characteristic | Fourth-quarter 1999 | 2000 | | | | Change, fourth-quarter 1999 to fourth quarter 2000[1] |
|---|---|---|---|---|---|---|
| | | First quarter | Second quarter | Third quarter | Fourth quarter | |
| **TOTAL** | | | | | | |
| Civilian labor force | 140,003 | 140,737 | 140,815 | 140,706 | 141,208 | 1,328 |
| Participation rate | 67.1 | 67.4 | 67.3 | 67 | 67.1 | 0.0 |
| Employed | 134,263 | 135,036 | 135,181 | 135,049 | 135,593 | 1,447 |
| Employment-population ratio | 64.3 | 64.6 | 64.6 | 64.3 | 64.4 | .1 |
| Unemployed | 5,740 | 5,700 | 5,634 | 5,657 | 5,616 | –118 |
| Unemployment rate | 4.1 | 4.1 | 4.0 | 4.0 | 4.0 | –.1 |
| **Men, 20 years and older** | | | | | | |
| Civilian labor force | 70,453 | 70,834 | 70,741 | 70,955 | 71,193 | 788 |
| Participation rate | 76.6 | 76.9 | 76.5 | 76.5 | 76.5 | -.2 |
| Employed | 68,076 | 68,487 | 68,426 | 68,644 | 68,768 | 739 |
| Employment-population ratio | 74.0 | 74.4 | 74.0 | 74.0 | 73.9 | –.1 |
| Unemployed | 2,377 | 2,347 | 2,315 | 2,310 | 2,425 | 49 |
| Unemployment rate | 3.4 | 3.3 | 3.3 | 3.3 | 3.4 | .0 |
| **Women, 20 years and older** | | | | | | |
| Civilian labor force | 61,140 | 61,508 | 61,666 | 61,429 | 61,657 | 583 |
| Participation rate | 60.8 | 61.1 | 61.1 | 60.7 | 60.7 | –.1 |
| Employed | 58,925 | 59,273 | 59,399 | 59,203 | 59,546 | 684 |
| Employment-population ratio | 58.6 | 58.9 | 58.9 | 58.5 | 58.6 | .0 |
| Unemployed | 2,215 | 2,234 | 2,267 | 2,226 | 2,111 | –102 |
| Unemployment rate | 3.6 | 3.6 | 3.7 | 3.6 | 3.4 | –.2 |
| **Both sexes, 16 to 19 years** | | | | | | |
| Civilian labor force | 8,410 | 8,395 | 8,407 | 8,322 | 8,358 | –42 |
| Participation rate | 52.2 | 51.9 | 52.4 | 52.1 | 52.3 | .1 |
| Employed | 7,261 | 7,276 | 7,356 | 7,202 | 7,278 | 24 |
| Employment-population ratio | 45.1 | 45.0 | 45.9 | 45.1 | 45.5 | .3 |
| Unemployed | 1,148 | 1,119 | 1,051 | 1,121 | 1,080 | –67 |
| Unemployment rate | 13.7 | 13.3 | 12.5 | 13.5 | 12.9 | –.8 |
| **White** | | | | | | |
| Civilian labor force | 116,919 | 117,579 | 117,535 | 117,468 | 117,729 | 873 |
| Participation rate | 67.3 | 67.6 | 67.5 | 67.3 | 67.3 | –.1 |
| Employed | 112,816 | 113,459 | 113,481 | 113,348 | 113,635 | 878 |
| Employment-population ratio | 64.9 | 65.2 | 65.1 | 64.9 | 64.9 | .0 |
| Unemployed | 4,103 | 4,120 | 4,054 | 4,121 | 4,095 | –5 |
| Unemployment rate | 3.5 | 3.5 | 3.4 | 3.5 | 3.5 | .0 |
| **Black** | | | | | | |
| Civilian labor force | 16,503 | 16,619 | 16,579 | 16,510 | 16,700 | 218 |
| Participation rate | 66 | 66.3 | 65.9 | 65.4 | 65.8 | –.2 |
| Employed | 15,170 | 15,322 | 15,306 | 15,258 | 15,452 | 302 |
| Employment-population ratio | 60.6 | 61.1 | 60.8 | 60.4 | 60.9 | .3 |
| Unemployed | 1,333 | 1,297 | 1,273 | 1,252 | 1,248 | –84 |
| Unemployment rate | 8.1 | 7.8 | 7.7 | 7.6 | 7.5 | –.6 |
| **Hispanic origin** | | | | | | |
| Civilian labor force | 14,918 | 15,215 | 15,314 | 15,356 | 15,596 | 693 |
| Participation rate | 68.0 | 68.8 | 68.7 | 68.3 | 68.8 | .8 |
| Employed | 14,015 | 14,324 | 14,443 | 14,490 | 14,723 | 721 |
| Employment-population ratio | 63.9 | 64.8 | 64.8 | 64.4 | 64.9 | 1.0 |
| Unemployed | 903 | 892 | 870 | 866 | 873 | –28 |
| Unemployment rate | 6.1 | 5.9 | 5.7 | 5.6 | 5.6 | –.5 |

[1] Estimates of over-the-year changes have been adjusted to reflect revisions to population controls introduced in January 2000.

NOTE: Detail for race and Hispanic-origin groups will not sum to totals because data for the "other races" group are not presented and Hispanics are included in both the white and black population groups.

SOURCE: Bureau of Labor Statistics, Current Population Survey.

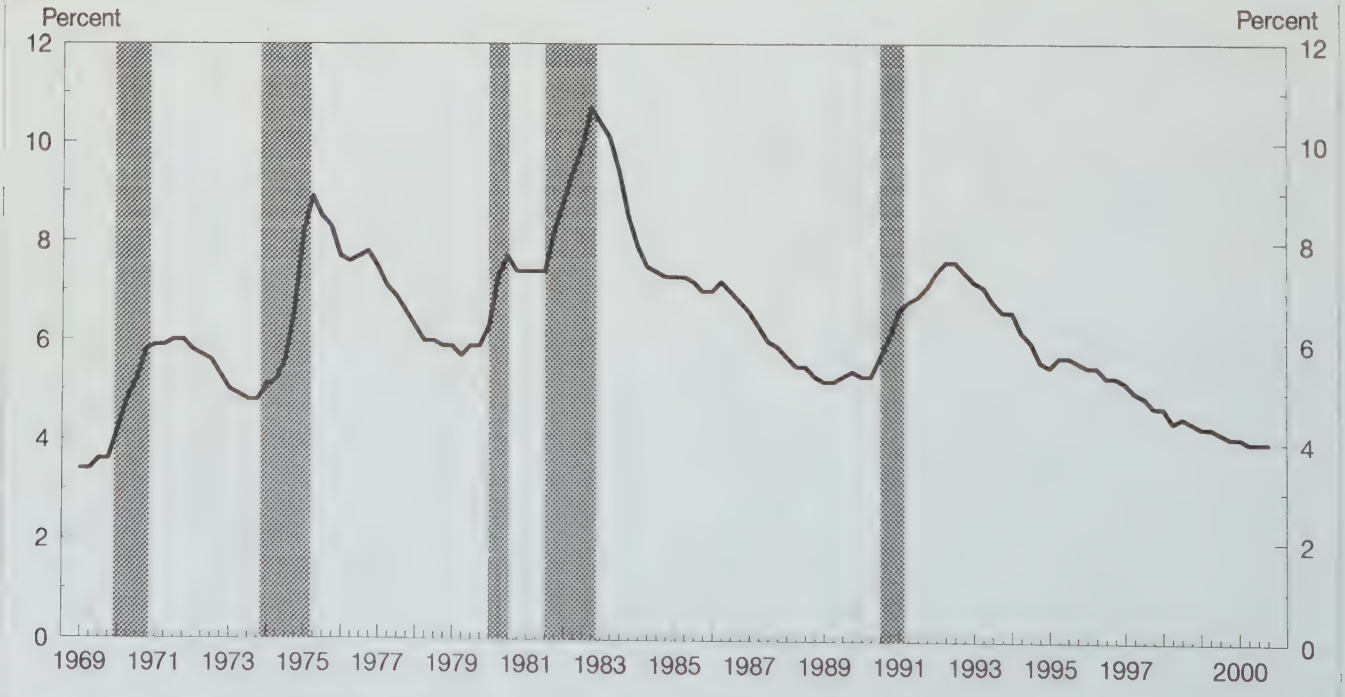
ployed persons declined for the 8th consecutive year, and the unemployment rate reached a 31-year-low of 4.0 percent in 2000. (See table 2 and chart 7.)

Virtually all of the employment growth occurred among adults aged 20 years and older. Employment increased by 739,000 for adult men and by 684,000 for adult women. The percentage of adult men who were employed in 2000 was about unchanged from 1999, at 73.9 percent. The employment-population ratio for adult women was 58.6 percent, about unchanged from 1999's record high. During most of the current expansion, [78] the ratios for men and women have continued the long-term pattern of convergence, with the women's ratio growing slightly faster than that for men. (See chart 8.) The number of unemployed adults decreased by 53,000 in 2000. The unemployment rate for adult men was 3.4 percent in 2000, unchanged from 1999. For adult women, the unemployment rate edged down to 3.4 percent, their lowest fourth-quarter rate since 1952.

The labor market situation for teenagers (persons aged 16 to 19 years) changed little between 1999 and 2000. The teenage unemployment rate edged down to 12.9 percent—their lowest rate since 1969. In 2000, 45.5 percent of teenagers were employed; a rate higher than the 42.2 percent at the beginning of the current expansion. Nevertheless, the percentage of teenagers employed is lower than the historical fourth-quarter peak of 48.7 percent in 1978. In 2000, 1 of every 4 employed teenagers worked in sales occupations (mostly in retail and personal service sales).[79] Nearly one-third of teenagers held service positions, primarily in food services. Another 24 percent of employed teenagers were almost equally split between administrative support occupations and handlers, equipment cleaners, helpers, or laborers.

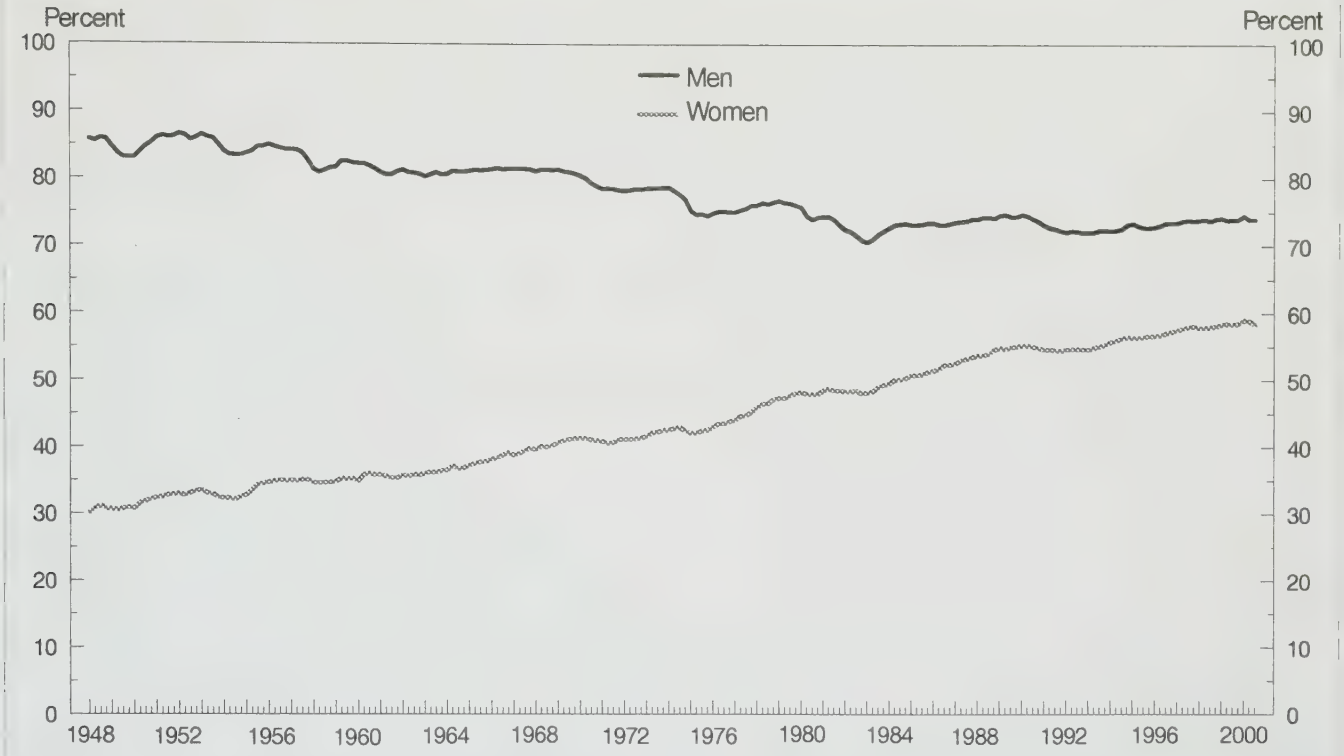
Among the race and ethnic groups, employment grew fastest for Hispanics. The number of employed Hispanics aged 16 and older grew by 5.1 percent; this compares with increases of 2.0 percent for blacks and 0.8 percent for whites. Part of the strong employment growth for Hispanics reflects population growth. The Hispanic population grew by 3.5 percent in 2000, while the black and white populations grew 1.6 percent and 0.8 percent, respectively. However, the increase in employment for Hispanics also reflects an increase in the percentage of their population that was employed. Their employment-population ratio reached an all-time high of 64.9 percent.[80] Among whites, the employment-population ratio remained unchanged over the year at 64.9 percent; among blacks, the ratio edged up slightly to 60.9 percent. Over the course of this expansion, the employment-population ratio grew the most for blacks (by 5.6 percentage points) and Hispanics (by 5.1 percentage points), growing closer to the rate for whites, which increased by only 2.2 percentage points.

**Chart 7. Unemployment rate, 1969–2000, seasonally adjusted**




NOTE: Shaded regions represent recessions as designated by the National Bureau of Economic Research. Data are quarterly.
SOURCE: Bureau of Labor Statistics, Current Population Survey.

**Chart 8. Employment-population ratio of adults ages 20 and older, 1948–2000, seasonally adjusted**




The unemployment rates for Hispanics (5.6 percent) and blacks (7.5 percent) declined to record lows in 2000, whereas the rate for whites (3.5 percent) was unchanged from the prior year's 3-decade low.[81] Though the unemployment rate for whites remained lower than that for blacks and Hispanics, the gaps between the unemployment rates for whites and blacks and for whites and Hispanics narrowed over the year.

Among workers aged 25 years and older, all of the employment gains were for workers with at least some college experience. Employment increased by 534,000 for workers with some college, and by 642,000 for workers with a bachelor's degree or more.[82] For workers with a high school diploma or less, employment declined. The unemployment rate was about unchanged for persons with less than a high school education (at 6.4 percent) and edged up for persons with a high school diploma (to 3.5 percent). The unemployment rate remained about unchanged for persons with some college experience (at 2.6 percent) and among college graduates (at 1.6 percent).

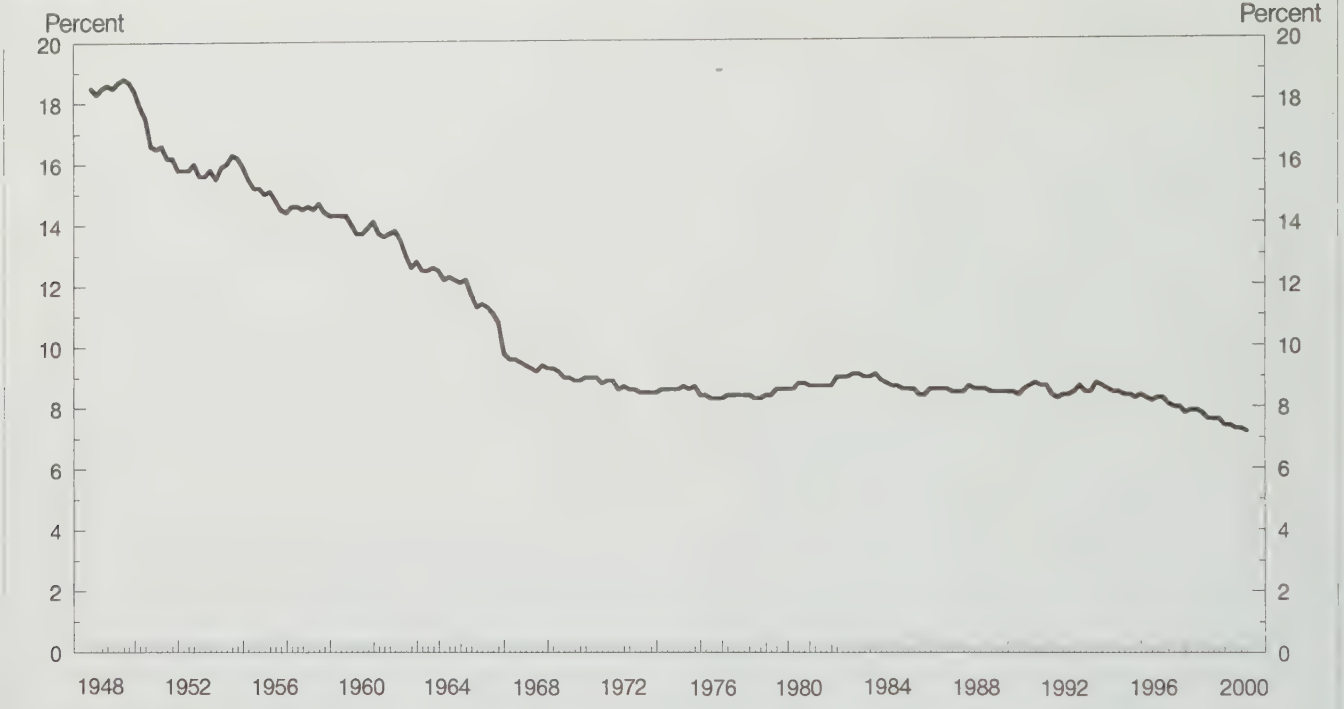
The number of employed persons aged 16 and older working usual full-time schedules (35 hours or more) increased to 112.3 million in 2000, accounting for 83.1 percent of the work force.[83] The percentage of workers employed full time has increased steadily since 1994 when it was 81.1 percent.[84] In 2000, men were more likely to have usual full-time schedules than were women; 89.8 percent of all employed men, compared with 75.3 percent of employed women. However, the number of women working full-time schedules has been growing faster than that for men. Since 1994, the number of women working full-time increased by 15.7 percent; this compares with an increase of 10.4 percent for men.

Of the number of persons at work part time in 2000, 3.2 million (or 10.8 percent) did so for economic reasons, such as only being able to find part-time work. Since 1994, the number of persons at work part time for economic reasons has declined by 31.0 percent. Among those at work part time in 2000, women were less likely (8.8 percent) than men (14.1 percent) to work part time for economic reasons.

Of the total number of employed persons in 2000, the vast majority (93 percent) were wage and salary workers.[85] Most of the remaining 7 percent were self-employed, a percentage that has been on a long-term downward trend. In 1948, almost 1 in 5 workers were self-employed, many of them as farmers.[86] (See charts 9 and 10.) In 2000, men were more likely to be self-employed than women; 8.3 percent of working men were self-employed, versus 5.9 percent of employed women.

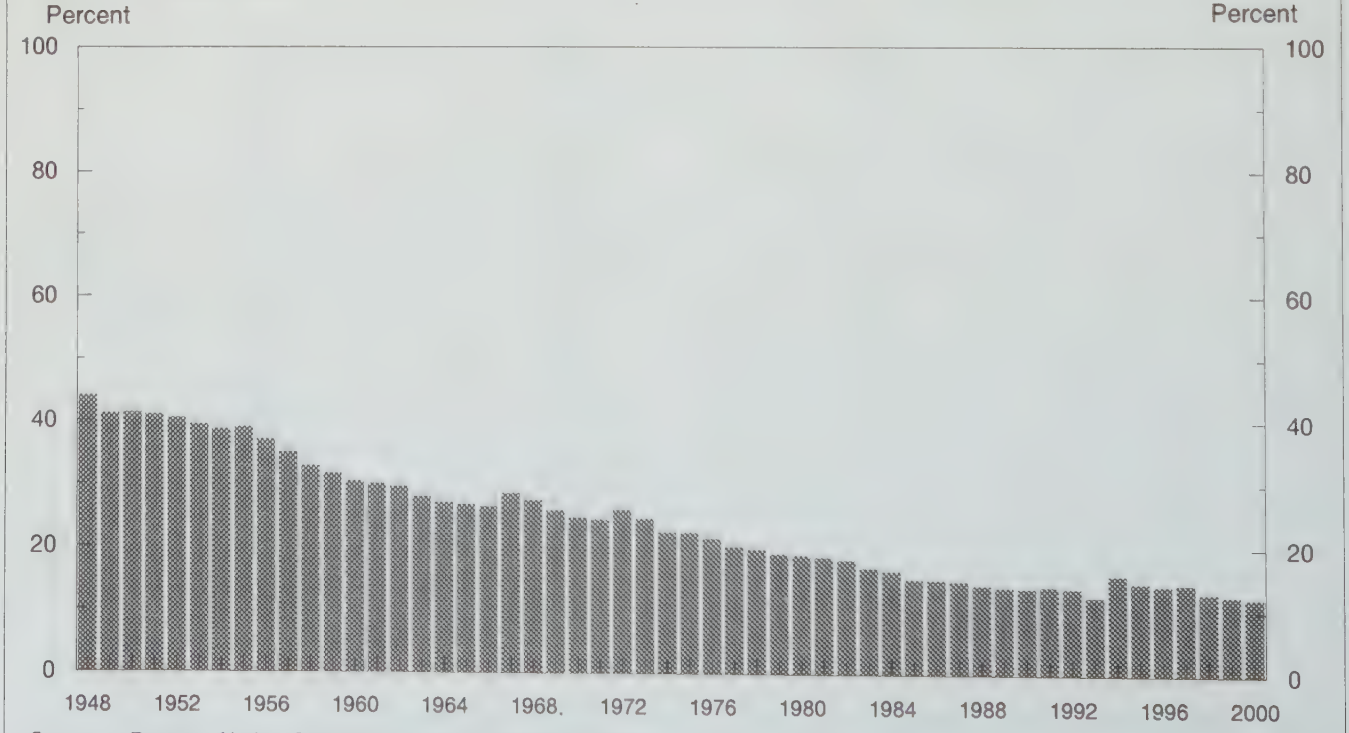
In addition to the 9.7 million persons who were self-employed in 2000, there were 4.4 million wage and salary workers who owned businesses that were incorporated.[87] The number of incorporated self-employed workers grew by 59,000 in 2000. Men were more likely to own an incorporated business than were women;

**Chart 9.** Self-employed as percentage of total employed, seasonally adjusted, 1948–2000




NOTE: Data are quarterly.
SOURCE: Bureau of Labor Statistics, Current Population Survey.

**Chart 10.** Share of total self-employed in agriculture, seasonally adjusted, fourth quarters, 1948–2000




SOURCE: Bureau of Labor Statistics, Current Population Survey.

of those business owners, almost two-thirds were men.

Among all wage and salary workers, employment grew the most in service occupations (811,000), followed by sales and administrative support occupations (493,000), and managerial and professional specialty occupations (340,000).[88] Within these broad occupational categories, strong growth occurred in food services, finance and business service sales, and financial records processing. Strong employment growth also occurred for mathematical and computer scientists, and schoolteachers.

***Median usual weekly earnings increased faster than inflation in 2000, marking the fourth consecutive year of increases in real earnings.***[89] *Earnings gains were widespread, growing particularly fast for blacks. The earnings gaps between blacks and whites closed slightly in 2000. At the same time, the number of hourly paid workers earning the minimum wage or less decreased.*

Median usual weekly earnings of full-time wage and salary workers were $576 in 2000, up 4.9 percent from $549 in 1999.[90] The earnings gain was larger than the 3.4-percent rise in prices from 1999 to 2000, as measured by the Consumer Price Index for All Urban Consumers (CPI-U). In 2000, median weekly earnings for men who usually work full time were $646, compared with $491 for women. Since the Bureau of Labor Statistics began regularly collecting information on usual median weekly earnings in the CPS in 1979, the ratio of women's to men's earnings has increased by 13.5 percentage points.[91] Women have gone from making 62.5 cents for every $1 earned by men in 1979, to making 76.0 cents for every dollar in 2000. There are many possible factors underlying the continuing disparity between the earnings of men and women. Among these factors are differences in work schedules, educational attainment, length of experience in the work force, occupational and industry makeup of each group, and discrimination.

Among the race and ethnic groups, median weekly earnings rose the fastest for blacks, up 5.2 percent to $468. This compares with an increase of 3.1 percent to $591 for whites and an increase of 2.9 percent to $396 for Hispanics. The gap in earnings between blacks and whites closed slightly in 2000. Over the course of the expansion, earnings increased by about 34 percent for whites and blacks; this compares with an increase of 27 percent for Hispanics. The disparity in earnings between the race and ethnic groups may be tied to the same factors as that for men and women: differences in educational attainment, length of experience in the work force, occupational and industry makeup of the groups, and discrimination.

In 2000, median usual weekly earnings rose in all four major educational groups. (See table 3.) Among persons aged 25 and older, earnings increased the most for workers with a college degree, rising by 4.2 percent over the year to $896. Earnings for persons with some college experience or an associate's degree increased by 3.1 percent to $598, while earnings for persons with a high school diploma increased by 3.3 percent to $506, and earnings for those with less than a high school diploma increased by 4.0 percent to $360.

**Table 3. Quartiles and selected deciles of usual weekly earnings of full-time wage and salary workers, by educational attainment, annual averages 1999–2000**

| Educational attainment | Number of workers (in thousands) | Upper limit of: First decile | First quartile | Second quartile (median) | Third quartile | Ninth decile |
|---|---|---|---|---|---|---|
| **2000** | | | | | | |
| Total, 25 years and older | 87,984 | $294 | $407 | $611 | $909 | $1,344 |
| Less than a high school diploma | 8,523 | 225 | 280 | 360 | 508 | 706 |
| High school graduates, no college | 27,637 | 279 | 364 | 506 | 716 | 966 |
| Some college or associate degree | 24,452 | 312 | 422 | 598 | 834 | 1,136 |
| College graduates, total | 27,372 | 448 | 625 | 896 | 1,325 | 1,870 |
| **1999** | | | | | | |
| Total, 25 years and older | 86,352 | $284 | $393 | $592 | $872 | $1,260 |
| Less than a high school diploma | 8,459 | 215 | 267 | 346 | 494 | 680 |
| High school graduates, no college | 27,314 | 270 | 349 | 490 | 688 | 932 |
| Some college or associate degree | 23,949 | 300 | 404 | 580 | 798 | 1,079 |
| College graduates, total | 26,630 | 430 | 607 | 860 | 1,243 | 1,749 |

SOURCE: Bureau of Labor Statistics, Current Population Survey.

NOTE: Ten percent of all full-time wage and salary workers earn less than the upper limit of the first decile; 25 percent earn less than the upper limit of the first quartile; 50 percent earn less than the upper limit of the second quartile, or median; 75 percent earn less than the upper limit of the third quartile; and 90 percent earn less than the upper limit of the ninth decile.

Among workers who had attained at least a high school diploma, earnings for the highest paid workers increased more than earnings for the lowest paid. For high school graduates with some college experience, earnings for the lowest paid workers increased by 4.0 percent to $312, while the highest paid graduates saw their earnings rise by 5.3 percent to $1,136. Among persons with a college degree, the difference in earnings growth for low and high paid workers was even more pronounced, 4.2 percent to $448 for the lowest paid and 6.9 percent to $1,870 for the highest paid.

For the second consecutive year, earnings for workers with less than a high school diploma increased at a faster rate for the lowest-paid workers than for the highest paid. Among these workers, earnings for the lowest paid workers increased by 4.7 percent to $225, while the highest-paid workers saw their earnings increase by 3.8 percent to $706.

Of the 120.8 million wage and salary workers (aged 16 and older) in 2000, 60.2 percent were paid hourly rates. Of these hourly paid workers, 3.7 percent (or 2.7 million) earned the prevailing minimum wage or less; significantly lower than the series peak of 15.1 percent in 1980.[92] Part of the decrease over time in the proportion of workers with earnings at or below the prevailing minimum reflect the fact that minimum wage increases have not kept up with overall wage growth. For example, from 1981–90, median hourly earnings rose by 41.6 percent, while the minimum wage rate was unchanged. It is reasonable to assume that many of those who would have earned minimum wage benefited from the general rise in the market wages over this period. The increase in earnings would bring these persons above the minimum wage, and hence, the percentage of employed persons earning the minimum wage would likely decrease.

In 2000, women were more likely than men to be earning the minimum wage or less; 4.8 percent of hourly paid women, compared with 2.6 percent of hourly paid men. However, this gap closed a bit over the year, as the decrease in the number of women earning minimum wage or less was greater than the decrease in the number of men earning minimum wage or less.

***Nine out of every ten families with children under the age of 18 had an employed parent in 2000.*** *A greater percentage of white families with children had at least one employed parent than had Hispanic families. In turn, a greater percentage of Hispanic families with children had an employed parent than had black families. In almost 2 out of every 3 married-couple households, both the mother and the father were employed. However, the age of the youngest child appears to have influenced the labor market activity of the parents.*[93]

Of the 34.3 million families with children under the age of 18 in 2000,[94] 73 percent (or 24.9 million) were married-couple families.[95] Unmarried mothers maintained the majority of the remaining families (7.6 million), while unmarried fathers maintained 1.8 million families with children.[96] Of the families maintained by an unmarried parent, the percentage maintained by the father increased from 16 percent in 1994 to 19 percent in 2000. Among families with children under the age of 18, white (77 percent) and Hispanic (71 percent) families were more likely to be maintained by married couples than were black families (43 percent). However, since 1994, the proportion of black and Hispanic families with children that are headed by married couples has increased slightly. For whites, that proportion has declined slightly.

The vast majority (92.0 percent) of all families with children under the age of 18 had at least one parent who was employed in 2000.[97] (See table 4.) Married-couple households were more likely to have at least one employed parent than were families maintained by an unmarried parent; 97.5 percent of married-couple families, compared with 75.5 percent of families maintained by the mother and 86.5 percent of families maintained by the father. Both the mother and father worked in 7 out of every 10 married-couple families whose youngest child was aged 6 to 17. If the youngest child was under the age of 6, both parents worked in slightly fewer than 6 out of every 10 married-couple families. The father, but not the mother, was employed in almost 2 in 5 married-couple families with children under the age of 6. It was relatively uncommon in 2000 for mothers of children younger than 6 to be working and not the fathers; this occurred in only 3.0 percent of such families.

White families with children under the age of 18 were more likely to have an employed parent (93.7 percent) than were Hispanic families (88.6 percent), who in turn were more likely than black families, (82.8 percent).[98] However, since 1994, the percentage of families with at least one employed parent has increased by 11.2 percentage points for blacks and 9.5 percentage points for Hispanics; this compares with an increase of 3.1 percentage points for whites. In 2000, both the mother and father worked in 67.9 percent of black married-couple families and 64.2 percent of white families with children under the age of 18, compared with 51.3 percent of Hispanic families. In contrast, the father worked, but not the mother in 40.1 percent of Hispanic families; this compares with 29.9 percent of white families and 20.2 percent of black families.

The average combined weekly hours at work for married couples with children edged up to 65.5 hours in 2000.[99] Since 1969, total weekly hours have increased by 9.3 hours (to 68.1 hours) for couples with children aged 6 to 17, by 10.3 hours (to 63.9 hours) for couples with children aged 3 to 5, and by 11.7 hours (to 60.7 hours) for couples with children under 3 years of age. Most of the increase in average combined weekly hours at work for married couples with children can be attributed to an increase in the labor force participation rate among married women, and to their trend toward year-round work.

In 1999, the latest year for which annual income data are available, the median yearly income of families with children under 18 years old was $48,711.[100] Married-couple families in which both parents (and no other family members) worked had

**Table 4.** Families with children by employment status of parents, age of youngest child,[1] and family type, annual averages, 1994–2000

[Levels in thousands]

| Characteristic | Total, all races | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
| **Families with children under 18** | | | | | | | |
| Total | 33,189 | 33,544 | 33,980 | 34,129 | 34,232 | 34,340 | 34,340 |
| With employed parents | 29,086 | 29,659 | 30,296 | 30,761 | 31,100 | 31,493 | 31,600 |
| Percent of total | 87.6 | 88.4 | 89.2 | 90.1 | 90.9 | 91.7 | 92.0 |
| Married-couple families, total | 24,319 | 24,604 | 24,818 | 24,762 | 24,820 | 24,904 | 24,915 |
| Percent with: | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Father employed, not mother | 28.6 | 28.5 | 28.2 | 28.2 | 28.9 | 29.1 | 29.2 |
| Mother employed | 67.3 | 67.6 | 68.3 | 68.7 | 68.1 | 68.2 | 68.3 |
| Father and mother employed | 62.6 | 63.0 | 63.9 | 64.5 | 64.1 | 64.1 | 64.2 |
| Mother employed, not father | 4.7 | 4.6 | 4.4 | 4.2 | 4.0 | 4.2 | 4.1 |
| Neither parent employed | 4.1 | 3.9 | 3.5 | 3.1 | 2.9 | 2.7 | 2.5 |
| Families maintained by mother[2] | 7,414 | 7,433 | 7,469 | 7,623 | 7,573 | 7,653 | 7,613 |
| Percent with employed mother | 61.6 | 64.0 | 65.9 | 69.2 | 71.8 | 74.7 | 75.5 |
| Families maintained by father[2] | 1,455 | 1,507 | 1,692 | 1,745 | 1,839 | 1,782 | 1,812 |
| Percent with employed father | 82.4 | 83.7 | 83.7 | 85.8 | 85.5 | 86.3 | 86.5 |
| **Families with youngest child 6 to 17** | | | | | | | |
| Total | 17,993 | 18,270 | 18,694 | 18,989 | 19,209 | 19,364 | 19,382 |
| With employed parents | 16,078 | 16,391 | 16,892 | 17,274 | 17,551 | 17,825 | 17,892 |
| Percent of total | 89.4 | 89.7 | 90.4 | 91.0 | 91.4 | 92.1 | 92.3 |
| Married-couple families, total | 12,819 | 13,001 | 13,257 | 13,442 | 13,496 | 13,565 | 13,628 |
| Percent with: | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Father employed, not mother | 22.6 | 22.5 | 21.8 | 21.9 | 22.8 | 22.6 | 22.0 |
| Mother employed | 73.5 | 73.5 | 74.6 | 74.8 | 74.0 | 74.6 | 75.2 |
| Father and mother employed | 67.9 | 68.0 | 69.5 | 69.8 | 69.2 | 69.6 | 70.3 |
| Mother employed, not father | 5.5 | 5.5 | 5.2 | 5.1 | 4.8 | 4.9 | 4.9 |
| Neither parent employed | 4.0 | 4.0 | 3.5 | 3.3 | 3.2 | 2.9 | 2.8 |
| Families maintained by mother[2] | 4,302 | 4,360 | 4,393 | 4,531 | 4,638 | 4,722 | 4,668 |
| Percent with employed mother | 70.8 | 72.1 | 73.3 | 74.9 | 77.0 | 79.1 | 79.6 |
| Families maintained by father[2] | 872 | 909 | 1,044 | 1,015 | 1,075 | 1,077 | 1,086 |
| Percent with employed father | 83.1 | 84.3 | 84.8 | 86.8 | 84.9 | 84.8 | 85.5 |
| **Families with youngest child under 6** | | | | | | | |
| Total | 15,196 | 15,275 | 15,286 | 15,141 | 15,023 | 14,976 | 14,958 |
| With employed parents | 13,009 | 13,267 | 13,405 | 13,487 | 13,550 | 13,670 | 13,709 |
| Percent of total | 85.6 | 86.9 | 87.7 | 89.1 | 90.2 | 91.3 | 91.6 |
| Married-couple families, total | 11,500 | 11,604 | 11,562 | 11,320 | 11,324 | 11,340 | 11,287 |
| Percent with: | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 | 100.0 |
| Father employed, not mother | 35.4 | 35.3 | 35.6 | 35.6 | 36.2 | 36.9 | 37.8 |
| Mother employed | 60.4 | 60.9 | 61.0 | 61.4 | 61.1 | 60.7 | 59.9 |
| Father and mother employed | 56.6 | 57.3 | 57.4 | 58.2 | 58.0 | 57.4 | 56.9 |
| Mother employed, not father | 3.8 | 3.6 | 3.6 | 3.3 | 3.1 | 3.3 | 3.0 |
| Neither parent employed | 4.2 | 3.8 | 3.4 | 2.9 | 2.7 | 2.4 | 2.2 |
| Families maintained by mother[2] | 3,112 | 3,073 | 3,076 | 3,092 | 2,936 | 2,931 | 2,945 |
| Percent with employed mother | 49.0 | 52.5 | 55.2 | 60.9 | 63.6 | 67.4 | 69.1 |
| Families maintained by father[2] | 584 | 598 | 648 | 729 | 763 | 705 | 726 |
| Percent with employed father | 81.2 | 82.9 | 82.1 | 84.6 | 86.5 | 88.5 | 88.0 |

[1] Children are own children and include sons, daughters, step-children, and adopted children. Not included are nieces, nephews, grandchildren, and other related and unrelated children.

[2] Refers to families maintained by never married, widowed, divorced, or separated persons.

SOURCE: Bureau of Labor Statistics, Current Population Survey.

a median income of $62,424. In married-couple families in which only one parent worked, median income depended on whether it was the mother or father who worked; income for families in which only the father worked was $42,955; this compares with a median of $31,248 when only the mother worked. Among families maintained by an employed, unmarried parent, median income was $18,933 for families headed by mothers and $30,924 for families maintained by fathers.

***Job growth continued across the United States as the Nation***

***enjoyed its tenth consecutive year of economic expansion, with the largest gains once again occurring in the West and South. Unemployment rates were steady or down slightly from the fourth quarter of 1999. During 2000, more than half the States achieved record low quarterly unemployment rates.***

*Unemployment.* Every census region and geographic division attained its lowest quarterly unemployment rate on record in 2000.[101] (See table 5.) The most marked unemployment rate declines over the year were recorded in the Northeast region, -0.4 percentage point, and its New England division, -0.8 point. The unemployment rate was down slightly in the South region, driven by declines in the West South Central and South Atlantic divisions. The Midwest rate held virtually steady over the year, despite a 0.4-percentage point rise in the West North Central division. The West region's rate was also essentially unchanged from 1999.

The relative positions of regions and divisions with respect to unemployment rates were largely stable over the year, owing to the lack of significant change in many parts of the country. The lowest regional unemployment rate was again reported in the Midwest (3.5 percent), which has held this distinction for each of the past 10 years. The highest incidence of regional joblessness was observed in the West (4.5 percent) for the ninth consecutive year. After experiencing a 0.4-percentage point drop from the previous quarter, New England recorded the lowest jobless rate (2.4 percent) among geographic divisions at the close of 2000. This is also the lowest quarterly unemployment rate on record for any region or division, and it marks the first quarter since 1989 that the lowest unemployment rate was posted by a division other than the West North Central. Meanwhile, the Pacific division registered the highest rate (4.8 percent) for the eighth year in a row.

Twenty-eight States established new quarterly low unemployment rates in 2000, while an additional five registered rates that matched lows established in a previous year. Four of the five States in the East North Central division, as well as seven of the eight States constituting the Mountain division, achieved new or equaled previous lows. In contrast, only 1 of the 5 States composing the Pacific division reported a new quarterly low in 2000. (See map 1.) New low *monthly* jobless rates were registered by 37 States in 2000, including all those in the East North Central and East South Central divisions.

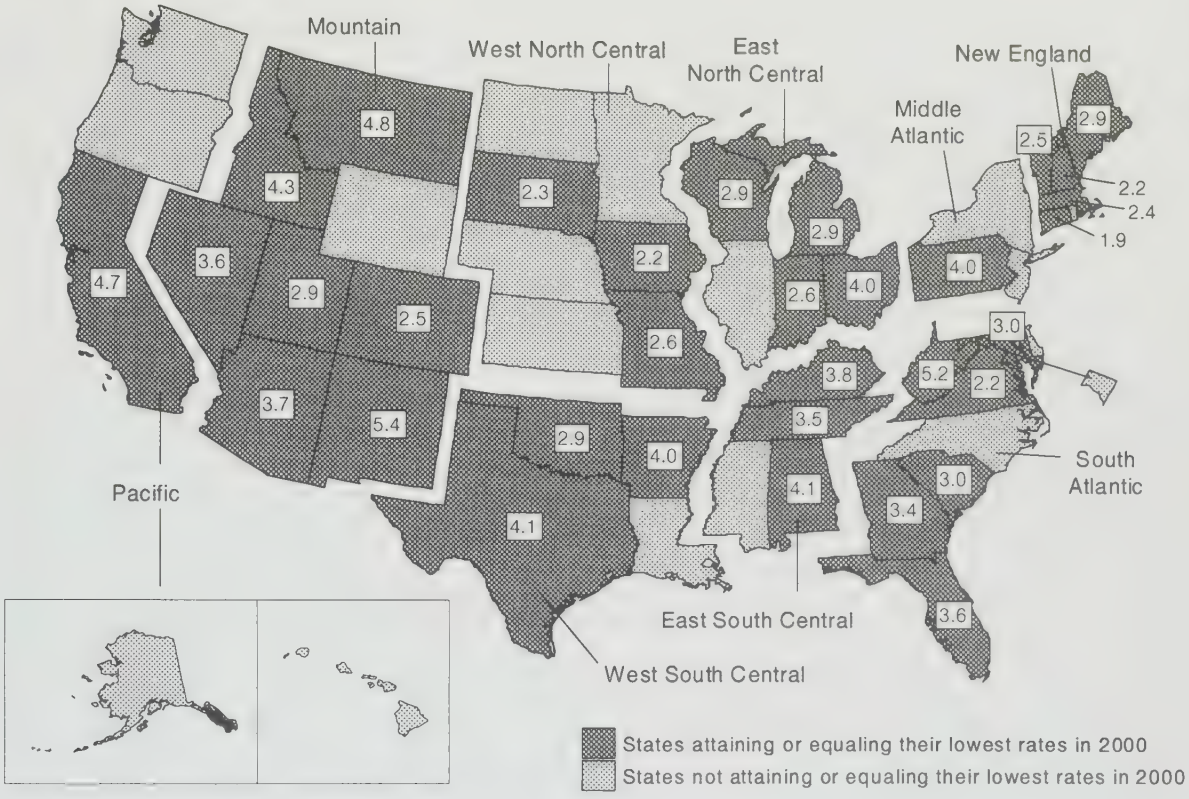
*Employment.* Nonfarm payroll employment increased in all four census regions in 2000.[102] The most rapid expansion occurred in the West (2.9 percent) and South (2.0 percent). The Midwest had the slowest rate of increase (0.9 percent), just slightly below that of the Northeast (1.3 percent). These relative growth rates were reinforced by population shifts; in general, growth in the South and West has been buoyed by migration from the Northeast and Midwest in recent years. Even after adjusting for differences in population growth, however, the relative ranking of job growth among regions remains the same. Among the nine geographic divisions, gains ranged from 0.6 percent in the East South Central to 3.1 percent in the Mountain division. The Pacific (2.7 percent), West South Central (2.3 percent), and South Atlantic (2.2 percent) divisions also had above-average growth rates. The tabulation on page 25 lists nonfarm payroll employment growth in 2000 (in thousands).

**Table 5.** Unemployment rates for regions and divisions, quarterly averages, seasonally adjusted, 1999–2000

| Region and division | Fourth quarter 1999 | 2000 | | | | Over-the-year change |
|---|---|---|---|---|---|---|
| | | First quarter | Second quarter | Third quarter | Fourth quarter | |
| Northeast region | 4.2 | 3.9 | 3.8 | 3.8 | 3.8 | –0.4 |
| New England division | 3.2 | 2.8 | 2.7 | 2.8 | 2.4 | –.8 |
| Middle Atlantic division | 4.6 | 4.3 | 4.2 | 4.2 | 4.3 | –.3 |
| Midwest region | 3.4 | 3.3 | 3.4 | 3.5 | 3.5 | .1 |
| East North Central division | 3.7 | 3.6 | 3.7 | 3.9 | 3.7 | .0 |
| West North Central division | 2.7 | 2.6 | 2.7 | 2.7 | 3.1 | .4 |
| South region | 4.0 | 3.9 | 3.9 | 3.8 | 3.8 | –.2 |
| South Atlantic division | 3.7 | 3.5 | 3.5 | 3.5 | 3.5 | –.2 |
| East South Central division | 4.3 | 4.2 | 4.2 | 4.1 | 4.4 | .1 |
| West South Central division | 4.4 | 4.4 | 4.3 | 4.2 | 4.1 | –.3 |
| West region | 4.6 | 4.5 | 4.6 | 4.6 | 4.5 | –.1 |
| Mountain division | 3.9 | 3.7 | 3.6 | 3.7 | 3.7 | –.2 |
| Pacific division | 4.9 | 4.8 | 5.0 | 5.0 | 4.8 | –.1 |

SOURCE: Bureau of Labor Statistics, Local Area Unemployment Statistics Program.

**Map 1.** States attaining or equaling lowest quarterly unemployment rate in 2000, seasonally adjusted




NOTE: Series low rates are provided for those States that achieved new or matched previous lows in 2000.
SOURCE: Bureau of Labor Statistics, Local Area Unemployment Statistics Program.

| *Region* | *Job growth* | |
|---|---|---|
| | *Number* | *Percent* |
| Northeast | 334.1 | 1.3 |
| New England | 103.5 | 1.5 |
| Middle Atlantic | 230.6 | 1.3 |
| Midwest | 289.3 | .9 |
| East North Central | 163.4 | .7 |
| West North Central | 125.8 | 1.3 |
| South | 890.0 | 2.0 |
| South Atlantic | 527.6 | 2.2 |
| East South Central | 49.2 | .6 |
| West South Central | 313.2 | 2.3 |
| West | 784.2 | 2.9 |
| Mountain | 259.2 | 3.1 |
| Pacific | 525.0 | 2.7 |

For most major industries, every geographic region and division posted net job growth in 2000. (See table 6.) Exceptions were confined to the industries that have been in decline for the past two decades or longer. Mining and manufacturing continued to shed jobs throughout much of the United States, with both the Midwest and Northeast regions registering a net loss in the number of mining jobs. Employment for that industry did post small gains, however, in four geographic divisions. No region saw a reversal in the trend of declining manufacturing employment, although the West South Central and Mountain divisions did experience small growth in the numbers of manufacturing jobs.

As in most recent years, the services industry accounted for the greatest number of new jobs in each region and division. In fact, services fueled at least one-third of net nonfarm employment growth in each region and geographic division,

**Table 6.** Percentage change in total nonfarm wage and salary employment by geographic division and major industry, seasonally adjusted, fourth quarter 1999–fourth quarter 2000

| Division | Mining | Construction | Manufacturing | Transportation and utilities | Trade | Finance, insurance, and real estate | Services | Government |
|---|---|---|---|---|---|---|---|---|
| New England | 4.9 | 6.0 | –0.6 | 0.8 | 1.2 | 1.0 | 2.3 | 1.5 |
| Middle Atlantic | –4.6 | 3.6 | –1.2 | 1.1 | 1.3 | .8 | 2.4 | .6 |
| East North Central | –3.8 | 1.3 | –.9 | 1.1 | .9 | .7 | 1.4 | 1.4 |
| West North Central | .0 | .6 | –.3 | 1.2 | 1.2 | .9 | 2.5 | 1.3 |
| South Atlantic | –.9 | 2.9 | –1.3 | 2.7 | 1.6 | 2.0 | 4.0 | 1.7 |
| East South Central | –2.5 | 1.0 | –2.2 | 1.2 | 1.0 | .1 | 1.9 | 1.4 |
| West South Central | 1.7 | 4.1 | .1 | 3.3 | 2.6 | 2.1 | 2.8 | 1.7 |
| Mountain | .3 | 3.1 | .9 | 3.0 | 3.2 | 1.1 | 3.9 | 3.6 |
| Pacific | .7 | 7.4 | –.3 | 3.3 | 2.2 | 1.4 | 4.0 | 2.5 |

SOURCE: Bureau of Labor Statistics, State and Area Current Employment Statistics Program.

while accounting for more than one-half the growth in 3 of the 4 regions and 6 of the 9 geographic divisions. Trade ranked second in net job creation in all 4 regions and all geographic divisions except the East South Central, where government was the second most plentiful source of net job growth. Of the major industries, construction exhibited the highest percentage growth rates in the West (5.8 percent) and Northeast (4.3 percent) regions, while services grew at the quickest pace of any industry in the South (3.3 percent) and Midwest (1.7 percent). Construction grew most rapidly in 4 of the 9 geographic divisions—most notably at the brisk pace of 7.4 percent in the Pacific division. The services industry exhibited the fastest growth in 4 of the 5 remaining geographic divisions.

Growth rates in excess of 3.0 percent were registered by at least one major industry in all geographic divisions except the East North Central, West North Central, and East South Central. The Mountain and Pacific divisions, which experienced the fastest overall growth, showed widespread strength, as seven major industries combined had growth rates above 3.0 percent.

THE LABOR MARKET BEGAN THE YEAR 2000 on a strong note, though the rate of growth slowed by the end of the year. Overall, nonfarm payroll employment increased by 1.6 percent over the year, down from its 2.2 percent growth in 1999. Slowing came in construction and across the service-producing industries, due to a combination of factors including higher interest rates, energy prices, and labor shortages. Mining employment, however, benefited from the higher energy prices. Manufacturing job losses diminished from 1999 to 2000, partly due to the strength of IT-related manufacturing and to improvements in aircraft orders. Yet, weakening in manufacturing industries related to construction and motor vehicles contributed to a reacceleration of factory job losses in the second half of the year.

The labor market situation improved for minority workers in 2000. The employment-population ratio reached record highs for both blacks and Hispanics. Also, blacks and Hispanics slightly closed the unemployment rate gap between whites, and blacks slightly closed the earnings gap between whites. The overall unemployment rate ended the year at 4.0 percent, the lowest rate since 1969. All four regions of the United States had historically low unemployment rates in 2000.

## Notes

[1] See the statements from the February, March, and May 2000 Federal Open Market Committee meetings, available on the Internet at **http://www.federalreserve.gov/fomc** (last accessed December 2000).

[2] At the time this article was written, fourth-quarter GDP data were not yet available.

[3] Gross Domestic Product: Third Quarter 2000 (Final), Bureau of Economic Analysis, December 21, 2000. **http://www.bea.doc.gov/bea/newsrel/gdp300f.htm** (last accessed in January 2001).

[4] See box on page 4 for an explanation of conceptual differences between the Current Population Survey (CPS) and the Current Employment Statistics survey (CES).

[5] Federal Reserve Chairman Alan Greenspan indicated in mid-October that "to date, the [general economic] spillover from the surge in oil prices has been modest." Remarks made at the 18th Annual Monetary Conference: Monetary Policy in the New Economy, Cato Institute, Washington, D.C., on the Internet at **http://www.federalreserve.gov/boarddocs/speeches/2000/200010192.htm** (visited November 2000).

[6] Over-the-year employment changes in this part of the article are based on fourth quarter comparisons of data from the Current Employment Statistics survey, using preliminary estimates for November and December 2000.

[7] Data from the Energy Information Administration, on the Internet at **http://www.eia.doe.gov/pub/oil_gas/petroleum/data_publica-**

**tions/weekly_petroleum_status_report/current/txt/table13f.txt** (visited January 2001).

[8] The merger-related job cuts by petroleum companies are cited numerous times in the industry and financial press. See, for example, Tracy Cox, "Economies of larger scale," *National Petroleum News*, May 1999.

[9] Christopher Palmeri, "Big Oil's Priority: Pump up the Stock Price," *Business Week*, Sept. 25, 2000.

[10] Production as measured by the Federal Reserve's Industrial production index for petroleum products (SIC 29), on the Internet at **http://www.federalreserve.gov/releases/G17/table2a.htm** (visited January 2001).

[11] The December 1999–2000 change in gas prices are measured by the CPI-U for gasoline.

[12] Sales data are published by the *Automotive News* Data Center. These data are available on the Internet at **http://www.automotive news.com** (visted January 2001).

[13] Mary Connelly, "High-profit SUVs pass pickups," *Automotive News*, Oct. 16, 2000.

[14] Russell Grantham, "Fuel prices, other woes put trucking firms on the skids," *The Atlanta Journal-Constitution*, Sept. 30, 2000; Chern Yeh Kwok, "Trucking Industry Hit Hard by Record-High Gas Prices," *St. Louis Post-Dispatch*, Sept. 19, 2000. Truck tonnage data is published in the American Trucking Association's *Monthly Truck Tonnage Report*.

[15] See, for example, "A surprise in January: Class 8 sales rise again," *Automotive News*, Feb. 28, 2000.

[16] Sales data refer to Class 8 trucks and are published by *Automotive News*.

[17] Truck tractor manufacturing is classified within part of motor vehicle assembly (SIC 3711) in the *Standard Industrial Classification Manual, 1987*.

[18] See the statements from the February, March, and May 2000 Federal Open Market Committee meetings, available on the Internet at **http://www.federalreserve.gov/fomc** (visited January 2001).

[19] The value of construction put-in-place statistics are produced by the U.S. Census Bureau; they are available on the Internet at **http://www.census.gov/const/www/c30index.html** (visited January 2001).

[20] The 2000 Federal Reserve Beige Book summaries consistently reported a softening in residential construction, but did not note any waning in commercial building until later in the year. These reports are available on the Internet at **http://www.federalreserve.gov/FOMC/BeigeBook/2000** (visited January 2001).

[21] Data produced by the Mortgage Bankers Association of America and published online at **http://www.mbaa.org/marketdata** (visited January 2001).

[22] Sheila Muto, "Prefab Home Makers See Sales Slowdown—Buyers Tend to Be First to Feel Effects of Tighter Credit," *The Wall Street Journal*, May 18, 2000; and "Manufactured Housing Industry Begins to Rebuild Itself," report by the Manufactured Housing Institute, available on the Internet at **http://www.manufacturedhousing.org/MC_poised_for_comeback.html** (visited November 2000).

[23] Data from the U.S. Census Bureau, Manufacturers' Shipments Inventories, and Orders program, available on the Internet at **http://www.census.gov/indicator/www/m3/index.html** (visited January 2001).

[24] See for example the June, August, and September 1999 Beige Book summaries, available on the Internet at **http://www.federalreserve.gov/FOMC/BeigeBook/1999** (visited January 2001).

[25] Trade data by SIC is available from the U.S. International Trade Commission's interactive tariff and trade dataweb, **http://dataweb.usitc.gov** (visited January 2001).

[26] This is a comparison of January–November 2000 retail sales with respect to the same period in 1999. The Census Bureau produces data on retail sales, which are available on the Internet at **http://www.census.gov/econ/www/retmenu.html** (visited January 2001).

[27] See *Key Trends in Securities Industry since 1990*, Securities Industry Association, on the Internet at **http://www.sia.com/publications/html/trends_during_1990s.html** (visited December 2000).

[28] The U.S. Census Bureau produces these data covering U.S. imports for consumption of steel products, not seasonally adjusted, for January through November 1999 and 2000. The data are available online at **http://www.census.gov/foreign-trade/Press-Release/steel_index.html** (visited January 2001).

[29] Robert Guy Matthews, "Too much steel, too few remedies," *The Wall Street Journal*, Oct. 23, 2000.

[30] See the PPI for blast furnaces and basic steel products, available online at **www.bls.gov/ppihome.htm** (visited January 2001).

[31] Import data by SIC industry comes from the U.S. International Trade Commissions tariff and trade dataweb.

[32] The comparison is made at the 2-digit level using the 1987 Standard Industrial Classification (SIC) system.

[33] Import data by SIC industry comes from the U.S. International Trade Commissions tariff and trade dataweb.

[34] Data are from the U.S. International Trade Commission's Interactive Tariff and Trade dataweb, and from the International Trade Administration Office of Textiles and Apparel, on the Internet at **http://otexa.ita.doc.gov** (January 2001).

[35] Passed in May 2000, The Trade and Development Act of 2000 provided (as of October 1, 2000) eligible countries duty-free, quota-free treatment for apparel assembled from U.S.-made fabric, yarn, and thread, or from fabric formed in any beneficiary country from U.S.-manufactured yarns. The text is available on the Internet at **http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=106_cong_public_laws&docid=f:publ200.106** (last visited December 2000).

[36] Textile finishing involves operations including bleaching, dyeing, printing (roller, screen, flock, plisse), and other mechanical finishing, such as preshrinking, calendering, and napping. Establishments in this industry perform finishing operations on purchased textiles or on a commission basis. The continued job losses in this industry contrast with the end of such losses in *broadwoven fabric mills* and *yarn and thread mills*. See *Standard Industrial Classification Manual, 1987*, available on the Internet at **http://www.osha.gov/oshstats/sicser.html** (visited January 2001).

[37] "The U.S. aerospace industry booked $32.4 billion in firm orders," *Aviation Week & Space Technology*, Sept. 18, 2000.

[38] Data on unfilled orders for aircraft, missiles, space vehicles and parts are from the U.S. Census Bureau, Manufacturers' Shipments, Inventories, and Orders program, available on the Internet at **http://www.census.gov/indicator/www/m3/index.html** (visited January 2001).

[39] Vince Galloro, "Embracing PPS," *Modern Healthcare*, Sept. 25, 2000, p. 14.

[40] The text of the Balanced Budget Refinement Act of 1999 is available online at **http://www.hcfa.gov/regs/bbra** (last visited January 2001).

[41] Richard Haugh, "A long-awaited (yet dreaded) debut," *Hospitals & Health Networks*, Sept. 2000, p. 16.

Unlike the prior cost-based system, the outpatient prospective payment system pays hospitals set amounts for about 700 procedure groups. Reimbursements are calculated using national average historical costs with an adjustment for regional wage differences. See, for example, Ann Saphir, "New PPS brings mixed blessing," *Modern Healthcare*, June 26, 2000, pp. 86–88.

[42] Laurie McGinley, "Hospitals feel sting of cuts from insurers," *The Wall Street Journal*, Mar. 16, 2000, p. B2.

[43] Mary Chris Jaklevic, "Positive outlook for not-for-profits," *Modern Healthcare*, Oct. 30, 2000, p. 2; and Barbara Kirchheimer, "Profits up for four hospital chains," *Modern Healthcare*, Oct. 30, 2000, p. 20.

[44] Both the Job Partnership Training Act and the Workforce Investment Act are available on the Internet at **http://wdr.doleta.gov/readroom/legislation** (last visited January 2001).

[45] Brian Sharp, "Onestop job shopping progresses, slowly," Gannett News Service, June 30, 2000. Alice Lipowicz, "City slapped over job training program: Funds delayed, critics charge city just doesn't care," *Crain's New York Business*, Aug. 21, 2000.

[46] Carlos Tejada, "Fewer youths get a shot at summertime jobs programs," *The Wall Street Journal*, June 27, 2000.

[47] See, for example, Wes Basel, "No More Desks to Conquer," *The Dismal Scientist*, **http://www.dismal.com/todays_econte_120600_2.asp** (visited December 2000).

[48] This measure is a ratio of 3-month moving average bookings to 3-month moving average shipments for the North American semiconductor equipment industry. It is produced by Semiconductor Equipment and Materials International and Arthur Andersen and is published online at **http://www.semi.org/web/wmktstats.nsf** (visited January 2001).

[49] Output per hour in Computer and office equipment surged by 875 percent between 1990 and 1998; data are from the Bureau of Labor Statistics Industry Labor Productivity program, **http://www.bls.gov/iprhome.htm** (visited January 2001).

[50] Historical data from the Federal Reserve's Industrial Production and Capacity Utilization program, **http://www.federalreserve.gov/releases/G17** (visited January 2001).

[51] Although it seems intuitively true that employment growth would precede production capacity growth, this relationship does not appear as consistently for some other manufacturing industries as it does for semiconductors.

[52] Wes Basel, "IT Wags the Dog," *The Dismal Scientist*, **http://www.dismal.com/todays_econ/te_080200.asp.**

[53] This is a comparison of January–November 2000 retail sales, with respect to the same period in 1999. The Census Bureau produces data on retail sales, which are available on the Internet at **http://www.census.gov/econ/www/retmenu.html** (visited January 2001).

[54] That is one strategy that department stores have used to try to recover market share from specialty retailers. Employment in department stores maintained its long-term downward march last year, with 5,000 jobs dropping off payrolls. See, for example, Evan Ramstad and Ann Zimmerman, The Next Big Holiday Thing(s)—Anxious Retailers Await Walmart Promotion," *The Wall Street Journal*, Oct. 5, 2000.

[55] Those online sales operations are classified within wholesale trade.

[56] Each Federal Reserve Beige Book in 2000 cited reports of labor shortages, particularly of "qualified workers."

[57] The payroll survey cannot provide direct evidence because it measures the number of payroll positions that firms have filled, but not how many positions firms would like to fill and cannot.

[58] The comparison is at the 2-digit SIC level.

[59] The American Staffing Association publishes quarterly data on sales of temporary help services, available online at **http://www.natss.org/staffstats/qtrlytrends.htm** (visited January 2001).

[60] Jianfeng Pei, "Labor shortage restrains temporary-staffing firms," *Purchasing*, May 18, 2000.

[61] See, for example, Timothy W. Brogan, "Thriving in a Dwindling Pool of Available Workers," *Staffing Success*, May-June 2000; it is also available on the Internet at **http://www.natss.org/staffstats/analysis.htm** (visited November 2000).

[62] Staffing Industry Analysts, "Staffing Industry Assisted and Restrained by Tight Job Market," press release, May 17, 2000, available online at **http://www.sireport.com/pressreleases/forecastrelease.html** (visited December 2000).

[63] David B. Oppendahl, "Understanding the (relative) fall and rise of construction wages," *Chicago Fed Letter*, July 2000.

[64] The manufacturing workweek in December may have been affected by winter storms in the Midwest, and so, part of its December decline from 41.2 hours to 40.4 hours likely reflects that weather impact.

[65] Ron L. Hetrick, "Analyzing the recent upward surge in overtime hours," *Monthly Labor Review*, February 2000, pp. 30–33.

[66] The data in this section of the article are annual averages.

[67] *Currently looking* refers to job search activity conducted within the 4 weeks preceding the survey. Had these persons been looking within that period, they would have been counted as *unemployed* rather than *not in the labor force.*

[68] An analysis of data on persons *not* in the labor force, but who indicated that they want a job, reveals that their labor market attachment is generally weak. Specifically, Monica Castillo ("Persons outside the labor force who want a job," *Monthly Labor Review*, July 1998, pp. 34–42) found that 41 percent of persons not in the labor force in 1994 who said they wanted a job were actually in the labor force a year later. The percentage was slightly higher for marginally attached workers (48 percent). For discouraged workers, 45 percent were in the labor force in 1995.

[69] A redesigned Current Population Survey was introduced in 1994. Some of the categories of persons not in the labor force were subject to major changes in definition. As a result, historical comparisons for these categories are only possible back to 1994.

[70] The repeal of the Social Security "earnings test" came about with the Senior Citizens' Freedom to Work Act of 2000. For more information, see the *Social Security Legislative Bulletin* (The President Signs the "Senior Citizens' Freedom to Work Act of 2000"), on the Internet at **http://www.ssa.gov/legislation/legis_bulletin_040700.html** (visited

November 2000).

[71] A May 1997 supplement to the Current Population Survey on reasons for working more than one job showed that 4 out of every 10 multiple jobholders did so to meet regular household expenses or to pay off debts. For more information, see "When one job is not enough," *ISSUES in Labor Statistics*, August 2000.

[72] In fact, interest in hiring foreign workers has increased, notably in sectors, such as high-tech, where companies report difficulty in finding qualified workers. One result is the recent signing into law of a bill that would increase the number of H-1B visas issued to skilled technology workers from abroad.

[73] Information on the labor force status of the foreign-born are readily available from the Current Population Survey going back to 1996.

[74] The employment-population ratio increased with the number of years the foreign-born spent in the United States, peaking at 72.2 percent in 2000 for persons who immigrated between 1975–84.

[75] To calculate the change in employment that is due to population growth, the employment-to-population ratio for the first time period is applied to the population for the second period, and the employment level derived is compared with the employment level for the first period. To calculate the change in employment due to shifts in the proportion of the population among the separate labor force categories, multiply the population estimate for the second period by the difference in the employment-population ratios for the two periods. This change describes net change between labor force categories, not the gross flows between categories.

[76] The data presented in this section of the article are seasonally adjusted fourth quarter figures, and over-the-year changes are based on fourth-quarter 1999 to fourth-quarter 2000 comparisons, unless otherwise noted.

[77] Beginning in January 2000, the population controls used in the CPS were revised to reflect newly updated information on immigration and an upward revision in the number of deaths. As a result, the civilian noninstitutional population 16 years and older was lowered by about 215,000. The labor force level decreased by about 125,000 and employment declined by 120,000. Overall and subgroup unemployment rates and other percentages of labor market participation were not significantly affected. Over-the-year changes in this article, which are generally based on fourth-quarter-1999 to fourth-quarter-2000 comparisons, have been adjusted for the effects of these revised population controls, unless otherwise noted.

[78] The National Bureau of Economic Research (NBER) determined that the trough of the recession in the early 1990s occurred in March 1991; hence, the expansion of the 1990s officially began in March 1991. The NBER designation will be used in this article. However, it should be noted that many labor market indicators showed weaknesses well into 1992. The unemployment rate, for example, did not peak until June 1992.

[79] Data on employment by occupation are not seasonally adjusted.

[80] Historical data on the employment-population ratio are available beginning in 1954 for whites, 1972 for blacks, and 1973 for Hispanics.

[81] Historical data on unemployment are available beginning in 1954 for whites, 1972 for blacks, and 1973 for Hispanics.

[82] Over-the-year changes in employment status by educational attainment have not been adjusted to reflect revised population controls because adjustment factors were not available.

[83] The data presented on full-time and part-time schedules are annual averages.

[84] Data for 1994 and subsequent years are not directly comparable with data for 1993 and earlier years because of the introduction of a major redesign of the Current Population Survey.

[85] Data on class-of-worker status are not seasonally adjusted. The over-the-year changes have not been adjusted to reflect revised population controls because adjustment factors were not available for all of the class-of-worker categories.

[86] Self-employed persons are those who work for profit or fees in their own businesses, professions, trades, or farms. Only the unincorporated self-employed are included in the self-employed category. Persons with incorporated businesses are classified as wage and salary workers because they are paid employees of a corporation.

[87] Persons whose businesses are incorporated are technically wage and salary workers because they are paid employees of a corporation.

[88] Data on employment by occupation are not seasonally adjusted.

[89] Median earnings figures indicate the value that divides the earnings distribution into two equal parts, one part having values above the median and the other having values below the median. Earnings are before taxes and other deductions, and include any overtime pay, commissions, or tips usually received (at the main job in the case of multiple jobholders). Data refer to wage and salary workers (excluding all self-employed persons regardless of whether or not their businesses were incorporated) who usually work full time on their sole or primary job.

[90] The data presented in this part of the article are annual averages, and changes are based on a comparison of 1999 and 2000 figures. Over-the-year changes in median weekly earnings were not adjusted for revised population controls because adjustment factors were not available.

[91] This aggregate ratio does not control for differences in many variables that may affect earnings. For more information on trends in the earnings of women, see Mary Bowler, "Women's earnings: an overview," *Monthly Labor Review*, December 1999, pp. 13–21.

[92] The prevailing Federal minimum wage was $5.15 in 2000 and $3.35 in 1981.

[93] The Current Population Survey tabulates information on the labor market activity of all household members aged 16 and older. However, this section looks at the employment status of the parents only.

[94] Children are own children and include sons, daughters, stepchildren, and adopted children. Not included are nieces, nephews, grandchildren, and other related and unrelated children.

[95] The data on the labor force status of parents in families are annual averages. The Current Population Survey has information on family labor force status readily available on an annual average basis going back to 1994. Similar data are available from the March supplement to the CPS; these data are available going back to 1975. The annual average data were used in this article because, by definition, they are based on 12 months of data rather than 1, and hence, provide stronger estimates.

[96] In the Current Population Survey, families maintained by the mother or by the father refer to parents never married, widowed, divorced, or separated.

[97] This represents employment in a typical week in 2000. It is expected that the percentage of families in which at least one parent had work experience in 2000 (worked at least some time during the year) would be higher. Indeed, the March 2000 Current Population Survey data on work experience in the prior year show that about 95

percent of families with children had at least one parent with work experience in 1999.

[98] A family is considered to have the same race and ethnicity as the householder. The "householder" refers to the person (or one of the people) in whose name the housing unit is owned or rented (maintained) or, if there is no such person, any adult member, excluding roomers, boarders, or paid employees. If the house is owned or rented jointly by a married couple, the householder may be either the husband or the wife. The person designated as the householder is the "reference person" to whom the relationship of all other household members, if any, is recorded.

[99] The data on average combined weekly hours at work are unpublished and were specially tabulated from the CPS for this article.

[100] Information on weekly earnings for families is not readily available from the Current Population Survey; however, data on family income are tabulated from the March supplements to the CPS by the Bureau of the Census. Though information on median income for families in 2000 is not yet available, the March 2000 supplement provides information pertaining to income in 1999.

[101] The four regions and nine divisions are composed of the following States and the District of Columbia: Northeast: *New England division*—Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont; *Middle Atlantic division*—New Jersey, New York, Pennsylvania; South: *South Atlantic division*—Delaware, District of Columbia, Florida, Georgia, Maryland, North Carolina, South Carolina, Virginia, West Virginia; *East South Central division*—Alabama, Kentucky, Mississippi, Tennessee; *West South Central division*—Arkansas, Louisiana, Oklahoma, Texas; Midwest: *East North Central division*—Illinois, Indiana, Michigan, Ohio, Wisconsin; *West North Central division*—Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota, South Dakota; West: *Mountain division*—Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, Wyoming; *Pacific division*—Alaska, California, Hawaii, Oregon, Washington.

With the exception of California, State monthly unemployment rate series began in January of 1978. The California series began in January of 1980. Hence, quarterly unemployment rate series for the West region and the Pacific division date from the first quarter of 1980, while series for all other regions and divisions date from the first quarter of 1978.

[102] Employment estimates for census regions and divisions are the sum of State estimates and are not intended to add to national totals. In addition, they are subject to revision resulting from re-estimation and updated seasonal adjustment effective with the release of January 2001 data.

# A perspective on the U.S.-Canada manufacturing productivity gap

*The U.S. advantage over Canada in manufacturing productivity growth during the 1990s, as measured by BLS, was led by dramatic growth in information-technology-related industries and does not appear to be significantly affected by the use of different statistical methods by the two countries*

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Over the 1977–98 period, productivity growth in U.S. manufacturing surpassed that of Canadian manufacturing—according to data from the Bureau of Labor Statistics international comparisons program, U.S. manufacturing productivity grew by 3.0 percent per year over the period, while Canadian manufacturing productivity grew by 2.0 percent per year. Of particular interest is the way this differential or gap has grown since the early 1990s. From 1992 to 1998, for example, productivity growth in U.S. manufacturing increased at a rate more than twice that of Canadian manufacturing productivity—4.1 percent per year for the United States versus 2.0 percent per year for Canada.

The gap in productivity performance between the U.S. and Canadian manufacturing sectors is illustrated in Chart 1. The two lines represent each country's output per hour relative to its own performance in 1977. This is the first year for which the comparative data are available for the United States. Policymakers, among others, seek explanations for this gap, and much has been written about it. Concern about the gap led the Centre for the Study of Living Standards to hold a conference in Ottawa in January 2000. This article is an update and revision of a paper presented by the authors at that conference. [1]

One set of comparative measures that indicates the presence of this gap is the BLS series on output per hour. (See the box on page 33.) These comparative measures are based on data from the national accounts of the United States and Canada. Therefore, one may question whether the entire measured gap is real or whether it may be due, at least in part, to differences in procedures used by the two countries to compile the national accounts. The objectives of this study are to determine the extent to which differences in the statistical measurement procedures used by the two countries explain the gap and then to analyze some real factors that may be contributing to the gap.

In this article, we review the procedures BLS uses to produce international productivity comparisons, along with the methods used by each country's statistical agencies to compile the underlying data used by BLS. In general, we find that the methods used by the two countries to construct the components of output per hour are quite similar. Where differences do exist, the differences do not appear to be substantially affecting measured differences in productivity growth over the period of inter-

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est. Some differences tend to reduce the gap, while other measurement differences increase the gap. Finally, we note that both countries revised their methods in 2000, leading to increased comparability for some methods between the data series.

The gap can be partially explained by real factors in the two countries, such as the growth of output and labor input and the performance of output per hour in certain important industries in the manufacturing sector. We find that for certain time intervals, Canadian productivity growth exceeds that of the United States and actually contributes to a closing of the gap. In addition, the differences in trends in labor hours appear to have a significant impact on productivity differences. Further, as other researchers have found, a substantial amount of the difference in productivity performance in the manufacturing sector can be explained by the outstanding productivity growth in the information technology sector of the U.S. economy. This growth was quite pronounced during the 1990s.

In this study, we focus on the period from 1988 to 1998 because it was a period in which dynamic economic activity occurred in certain industries in manufacturing, especially information technology and related industries. Also, this period allows for analysis between an output-peak year (1988), a near-trough year (1992), and a point well into an expansion (1998) for each country. Finally, it is a period, presumably, of more interest to policymakers than earlier or longer periods. Due to data availability, the industry-level analysis is restricted to the 1988–96 period.

The data used by BLS to construct international comparisons of productivity are obtained from the statistical agencies of the United States and Canada. There are differences in the methods used by the two countries, which can affect comparative productivity measures. We examine the U.S. and Canadian methodologies for measuring manufacturing outputs and labor inputs in an attempt to identify differences that can lead to a lack of comparability of the aggregate manufacturing productivity measures. The three possible sources of differences explored in this study are *industrial classification*, concept and estimation of *output*, and estimation of *labor input*.[2] In the following three sections, each of these areas is reviewed in detail, with the objective of identifying differences in methods that may contribute to the gap between U.S. and Canadian productivity.

Many of the issues examined in this study have been raised in the literature on the topic, with some of them becoming more important recently because countries are in the process of adopting new standard systems of national accounts.[3] Although the adoption of the new systems will lead to some convergence in methods and enhanced comparability, the ex-

**Chart 1. Output per hour in manufacturing, United States and Canada, 1977–98**

The Bureau of Labor Statistics publishes comparative measures of the annual growth in output per hour and unit labor costs for the manufacturing sectors in the United States and in 11 foreign competitor countries. The most current data can be found at **http://stats.bls.gov/flshome.htm**. (Levels of productivity are not included in the series.) The length of the historical series varies by country, but comparisons among all countries may be made from 1977 to 1998.

In addition, BLS publishes quarterly measures of output per hour for U.S. manufacturing in its news release on U.S. productivity and costs. The most current data may be found at **http://stats.bls.gov/lprhome.htm**. This series is based on the concept of sectoral output. Sectoral output is gross output (shipments or sales plus changes in inventories) less intrasectoral sales and transfers. The concept of sectoral output is also used in the production of output per hour and multifactor productivity measures for the U.S. manufacturing sector and component industries.

For the international comparisons series, the value-added concept of output—that is, gross output less intermediate purchases—is used because the data are more readily available in the countries' national accounts, whereas using sectoral output would require a complex estimation procedure. Also, although BLS has determined that sectoral output is the correct concept for U.S. measures of single-factor productivity (output per hour), there are other considerations that may make the value-added concept better for international comparisons, such as differences among countries in the extent of vertical integration. In the value-added series, output per hour in the United States grew by 3.0 percent per year between 1977 and 1998, while in the sectoral output series, output per hour grew by 2.8 percent per year over the same period.

tent to which the countries have chosen or have been able to adopt all aspects of the new systems varies.

## Industrial classification

Aggregate manufacturing data for the United States are published according to the 1987 Standard Industrial Classification system (US-SIC87).[4] The aggregate manufacturing data for Canada conform to the Canadian 1980 Standard Industrial Classification system (C-SIC80).[5] At the aggregate level, the classifications of the manufacturing sector for the United States and Canada are quite similar.[6] The main difference between the two systems is the treatment of the logging industry, which is a component of the manufacturing sector in the U.S. system but not in the Canadian system.[7]

To investigate the significance of the difference in the classification of the logging industry on manufacturing performance, we made two comparisons. First, we adjusted the U.S. aggregate measures to exclude logging, and then we adjusted the Canadian aggregate measures to include logging.[8] Annual trends in output per hour for U.S. manufacturing, Canadian manufacturing, and the adjusted series for the United States and Canada are shown in the following tabulation:

| | *United States* | | *Canada* | |
|---|---|---|---|---|
| | *As published* | *Adjusted* | *As published* | *Adjusted* |
| 1988–96 | 2.4 | 2.4 | 2.4 | 2.3 |
| 1982–92 | 0.8 | 0.8 | 2.5 | 2.3 |
| 1992–96 | 4.0 | 4.0 | 2.3 | 2.2 |

Notice that trends for the two U.S. series are identical, while the Canadian series differ slightly. The logging industries in the United States and Canada both demonstrate negative productivity growth. However, the relative size of logging in the adjusted Canadian measures is significantly larger than its share in U.S. manufacturing. The logging industry accounts for approximately 3.7 percent of Canadian adjusted 1996 manufacturing value added and less than 0.3 percent of 1996 value added in U.S. manufacturing. Thus, the adjusted measure of productivity in Canada grew by approximately 0.1 percentage points less than the published Canadian measure during the 1988–96 period. Based on the adjustments we were able to make, it appears that including logging in the Canadian measure of aggregate manufacturing productivity would increase the gap between the U.S. and Canadian productivity measures a small amount, while excluding it from the United States would have no effect.

## Output

*Primary data sources.* For the U.S. international productivity comparisons, output data are taken from the Bureau of Economic Analysis (BEA) series "Gross Product Originating by Industry," a value-added measure of output.[9] Data for benchmark years (1977, 1982, 1987, and 1992) are based primarily on data from the input-output accounts. Data for nonbenchmark years are interpolated between benchmark years and extrapolated from the last benchmark (1992) forward. Interpolators and extrapolators are based on shipments and inventory-change data from the Bureau of the Census Annual Survey of Manufacturers and the 1996 annual input-output tables.[10]

For Canada, output data are based on measures of real GDP by industry published by the Industry Measures and Analysis Division of Statistics Canada.[11] The underlying data on gross output and detailed intermediate purchases are based on data from the input-output tables derived from the Canadian Annual Survey of Manufacturers and their 5-year Census of Manufacturers. The latest input-output table underlying the data in this study is for 1996. Statistics Canada estimates the current 2 years of data on real GDP by industry using monthly data.[12] These monthly estimates are based on proxy indicators such as gross output and the assumption that the relationship between inputs and outputs is fixed.

*Output valuation.* The United States and Canada differ in the concept of prices used to value gross output in the value-added measures used by BLS for international comparisons of productivity. Real value-added data for both countries is measured with the double deflation procedure; the real value of intermediate purchases of materials, energy, and services are subtracted from the real value of gross output.[13] BEA measures gross output at market prices, while Statistics Canada measures gross output at basic prices.[14]

The main difference between output valued at market prices versus basic prices is the treatment of taxes and subsidies. The value of output at market prices is the amount receivable by the producer from the purchaser for a unit of a good produced. The value of output at basic prices is the value of output at market prices, less any tax payable, and plus any subsidy receivable on that unit as a consequence of its production or sale. The different treatment of taxes and subsidies among countries has been raised as a source of noncomparability in international comparisons.[15]

We found that the different treatment of subsidies between the United States and Canada is not a major issue. From 1987 forward there have been no subsidies assigned to manufacturing in the United States;[16] further, in Canada subsidies have accounted for less than 1.0 percent of manufacturing income. Thus, the current difference in practices concerning subsidies in each country does not lead to substantial differences in productivity growth.

Although taxes are a component of nominal output in the United States, the BEA measurement technique ensures that a change in taxes would not be reflected in the growth of real output. Prices for the BLS producer price indexes, which are used extensively for deflation, are collected exclusive of taxes. These producer price indexes are applied to shipments data that do not include taxes. BEA then makes an adjustment so that real shipments plus taxes grow at the same rate as real shipments. Using this technique removes the effect of the tax change from the growth of the real value of shipments. Thus, we conclude that the U.S.-Canada productivity gap is not affected by the different valuation of output.

*Aggregation index.* As a result of the revision to the Canadian output series in May 2000, Canada and the United States now use similar methods to aggregate output components. Real output is constructed for very detailed components within manufacturing, and these components are then aggregated together to arrive at a measure of output for the entire manufacturing sector.[17] The United States and Canada use a chained Fisher index to aggregate components of real gross output, intermediate inputs, and value added in manufacturing.

The Fisher index is a geometric mean of the conventional fixed-weight Laspeyres index and a fixed-weight Paasche index. The Fisher index is calculated using price weights for both periods of comparison, thus avoiding the substitution bias that exists in measures employing price weights for a single year (fixed-weight indexes). Substitution bias refers to the inability of a fixed-weight index to account for substitutions made in response to changes in relative prices over time. This substitution bias is particularly an issue in manufacturing, because the decline in computer prices has had a major impact on relative prices.[18]

In order to construct an historical series, adjacent-year Fisher indexes are "chained" (multiplied) together. The United States adopted the chain-type annual-weight (Fisher) output index in the comprehensive revision of 1996. In a study following the adoption, BEA indicated that over the 1987–93 period, the annual growth rate of real value added for manufacturing was revised downward approximately 0.9 percentage points. Previous measures for this period were constructed with a fixed-weight index with a 1987 base year. BEA stated that the change in index formula was a major factor in this downward revision of manufacturing real value added.[19]

Canada adopted the chained Fisher output index in May 2000, revising data back to 1961. This change resulted in a slight downward revision to growth of real value added in manufacturing for the 1988–98 period. Prior to the revision, Canada measured real GDP in manufacturing using a fixed-base-volume index, in which the base year was updated periodically, approximately every 5 years.[20]

In the BLS productivity comparisons prior to May 2000, different aggregation indexes were being used to construct the underlying data for the United States and Canada. A productivity gap can be defined as the ratio of the U.S. index of output per hour to the Canadian index of output per hour. In the tabulation that follows, a comparison is presented showing the annual growth of the current published productivity gap and the growth of the gap as measured prior to May 2000—with Canada using the fixed-weight index and the United States using a Fisher index. Positive values indicate faster growth (or slower decline) of the U.S. variable relative to the Canadian variable, thus widening the gap; negative values indicate that the U.S. variable either rose slower or fell faster than its Canadian counterpart, closing the gap.

| | *As published* | *Pre-2000* |
|---|---|---|
| 1988–98 | 0.6 | 0.4 |
| 1988–92 | –1.6 | –1.8 |
| 1992–98 | 2.1 | 1.9 |

The data indicate that adopting the chained Fisher index formula resulted in slower annual growth in value added in Canada, thus expanding the U.S.-Canada productivity gap by approximately 0.2 percentage points per year. However, because the two countries now use the same aggregation index formula, this measurement issue no longer affects current productivity comparisons.

*Treatment of Software.* The United States and Canada treat software differently in the national accounts.[21] However, because software plays a very small role in manufacturing value added in both countries, the different treatment has only a slight effect on the productivity gap.

Prior to October 1999, the United States and Canada measured software purchases and production in a similar manner within their national accounts—both countries treated software as an intermediate input in production. In the 1999 comprehensive revision of the U.S. national income and product accounts,[22] BEA recognized business and government expenditures for software as fixed investment—that is, as an asset that produces flows of services lasting more than one year. This revision is consistent with recommendation 10.92 of the United Nations *System of National Accounts 1993*.[23] To date, Statistics Canada has been unable to incorporate the United Nations recommendation for the treatment of software; the agency currently is evaluating the feasibility of adopting this recommendation.

The new treatment of software by the United States affected both components of real value added. The reclassification of software purchases decreased real intermediate inputs,[24] and the recognition of own-account software production as part of gross output increased real gross output. These changes resulted in an upward revision to real value added for the U.S. economy.

There was very little impact on manufacturing industries,[25] where value added was revised upward by about 1 percent, only slightly affecting trends. The small effect on U.S. manufacturing value added is due to the small size of software as an input to manufacturing. Although software's share of intermediate purchases has been increasing rapidly—more than doubling from 1988 to 1998—it still was only about 0.5 percent in 1998 for the United States.[26] (The industries most affected by the new treatment of software were outside of manufacturing: wholesale trade; retail trade; finance, insurance and real estate; and services.)

Using BEA data for tangible wealth investment, it is possible to estimate value added for U.S. manufacturing to reflect the prior treatment of software as expenditures. We recalculated real value added by adding software purchases back to real intermediate inputs and removing own-account software production from real gross output.[27] The results of this simulation affected the annual growth of the productivity gap as follows:

| | *As published* | *Adjusted* |
|---|---|---|
| 1988–98 | 0.6 | 0.5 |
| 1988–92 | –1.6 | –1.8 |
| 1992–98 | 2.1 | 2.0 |

The data show that the growth in the U.S.-Canada productivity gap has widened approximately 0.1 percentage point as a result of the new treatment of software by the United States.

Data were not available to adjust the Canadian data to the U.S. basis; however, we did confirm that software plays a similar minor role in Canadian manufacturing. Intermediate inputs of software in Canadian manufacturing account for about 0.5 percent of 1996 intermediate purchases.[28] Thus, we conclude that the different treatment of software by the United States and Canada is having only a small impact on the productivity gap in manufacturing. If software continues to grow substantially, the different treatment by the two countries could become more of an issue in the future.

*Prices of information technology products* The general procedures used by the United States and Canada to measure price change for important information technology products are fairly similar, although the actual results for semiconductors vary substantially. Since 1996, the methods used by the two countries for these products have become more similar, but the historical series still are affected by the pre-1996 differences.

The category of information technology products can be specified to include computers and communications hardware, as well as the software and associated services required to effectively use that hardware.[29] Because this specification includes a broad range of products, we have chosen to limit the present discussion to certain types of computers and communications hardware that have been discussed in the literature as posing international comparability problems or that have displayed rapid price change in national accounts statistics. Three information technology products within the manufacturing sector were selected: computers, telephone switching equipment, and semiconductors. These products were selected because the industries that produce them play a significant role in explaining the productivity gap in the manufacturing sector (as will be discussed later in this article). Also, a BEA study of industry price measures noted that declines in gross output prices in certain information technology industries between 1992 and 1996 were primarily for prices for these three products.[30] Finally, semiconductors are important inputs into several industries, and thus value-added output is

affected when they are removed.

As products change over time, it is crucial that their price indexes accurately account for changes in product quality. One traditional way to adjust for quality change is to assume that an increase in the quality of a product is associated with an increase in the cost of producing it. This cost increase can be used to determine how much of the item's price change is due to quality change. For information technology products, however, the cost and price of the improved version often fall below those of the previous lower quality versions.[31]

Several statistical techniques exist that can be used to construct price indexes for information technology products. Two commonly noted techniques are the *matched model* technique and the *hedonic regression* technique. The matched model technique controls for quality by measuring price change only for products or models that exist in two periods. Traditionally, when the technique was applied, only prices for models that existed in both periods were used in the index. The price of any nonmatched model was disregarded. An alternative application calls for an attempt to estimate the missing price in some manner—for example, by using the price change for another appropriate model as a proxy.

The hedonic regression technique regresses the price of a product against a list of product characteristics thought to influence (or provide a proxy for) quality. There are actually various ways the technique can be employed, including estimating a price index from regression coefficients for variables representing specific time periods or estimating missing prices for particular models derived from a cross-sectional hedonic equation. In the latter case, when the quality of the product changes, as reflected in changes in one or more of its characteristics, an adjustment can be made to the product's price to account for this quality change.

The matched model technique and hedonic technique also can be used in combination. Hedonic regressions have been used to estimate prices for those models not available in both periods of comparisons, and then the prices estimated with the hedonic equation are combined with the prices of other available models in a matched model procedure.

The use of these two techniques by different countries has been cited often as a reason for noncomparability of international comparisons. For example, Andrew A. Wyckoff examines computer price methodologies for several countries and finds that both the matched model and the hedonic techniques are employed. He argues that the difference in price behavior can be significant, depending upon the technique chosen. Further, based on the results of studies of U.S. data, he notes that typically the matched model index falls at a slower rate than the hedonic index; sometimes it even increases.[32]

To assess the comparability of prices for information technology products in specific countries, it is necessary to look beneath the dichotomy of the matched model and the hedonic techniques. There can be considerable variation in the actual implementation of the same general technique, whether it be the hedonic or the matched model technique. Alternative applications of the same technique, even within the same country, may yield different results. Further, it is also possible that particular applications of the two different techniques may produce similar results.[33]

Without knowing the exact application of either technique, it is difficult to argue a priori that the use of the same technique in each country yields more comparable results than the application of different techniques. Given this difficulty, we proceeded as follows. For each information technology product, we examined the two countries' uses of the hedonic technique and the matched model technique, and we also looked at the price behavior between 1992 and 1996 of the four-digit industries producing these products.[34] Where the countries used different techniques or the price behavior appeared substantially different, we attempted to assess the impact on the productivity gap.

*Computers and related products.* The value-added output measures for the United States and Canada are based on the use of similar techniques to measure prices for computers and related devices.[35] Both countries employ the hedonic technique to account for quality change. The implicit prices or price indexes[36] of the industries producing these products are as follows:

| | *United States* | *Canada* |
|---|---|---|
| 1992 | 100.0 | 100.0 |
| 1996 | 50.0 | 63.3 |

The prices for computers and related devices in both countries fell considerably between 1992 and 1996. In the United States, prices fell about half, while in Canada, they fell by about a third.

BEA uses a hedonic procedure to capture quality change in prices for computers, as well as for printers, displays, direct access storage devices, and tape drives.[37] The resulting price indexes for five-digit product classes are then linked to the BLS producer price indexes that became available in 1990 and are also based on the hedonic technique.

The Canadian price index incorporates some prices from the U.S. series, as well as some from Canada. From 1981 forward, the Canadians have used a weighted average of the BEA series for computers, direct access storage drives, printers, and displays, using weights based on Canadian production levels. The BEA tape drive index was not used because the output of this product is small in Canada. The BEA series were incorporated into the Canadian price index through 1992, at which point, price indexes for microcomputers and printers were based on prices collected in Canada and adjusted with a hedonic procedure. The BEA series were adjusted for exchange rate variations in order to ex-

press the indexes in terms of Canadian prices.

Because Canada has actually incorporated some U.S. price data and is using the same general hedonic technique for microcomputers and printers, measurement differences in this industry do not seem to be contributing to the gap. This is reinforced by the large price declines in both countries. Presumably, the differences in the prices are due to the different relative importance of the products within the aggregate category of computers and related devices, as reflected in the Canadian reweighting of the BEA prices. The Canadian adjustment for exchange rates could contribute to the difference as well.

*Telephone switching equipment.* The United States and Canada use different procedures to measure prices for telephone switching equipment,[38] a product within telephone and telegraph apparatus. Through 1996, the United States employed the hedonic technique, while Canada employed the matched model technique. The implicit prices or price indexes for the industries producing these products are as follows:

| | *United States* | *Canada* |
|---|---|---|
| 1992 | 100.0 | 100.0 |
| 1996 | 82.9 | 105.6 |

Over this period, U.S. prices fell by a little less than 20 percent, while Canadian prices increased a small amount—not an insignificant difference.

BEA produced a hedonic price index for telephone switching equipment until 1996.[39] Canada produces a price series for telephone switching equipment based upon purchased prices collected from Canadian telephone companies. In Canada, the matched model technique is used. Despite these differences in techniques and the resulting price differences, the impact on the manufacturing productivity gap is probably fairly small. In 1992 and 1996, the nominal output of the telephone and telegraph apparatus industry in the United States and the corresponding industry in Canada accounted for about 1 percent of shipments in the respective manufacturing sectors of each country. Of this 1 percent, the telephone switching equipment industry in the United States represented less than half.[40]

*Semiconductors.* The United States and Canada used similar techniques to construct prices for semiconductors[41] in constructing value-added output through 1996. The differences in results are due more to the differences in source data, rather than to the use of different techniques. The implicit prices or price indexes for the industries producing these products in the two countries are as follows:

| | *United States* | *Canada* |
|---|---|---|
| 1992 | 100.0 | 100.0 |
| 1996 | 32.6 | 100.4 |

Prices for this industry fell by about two-thirds in the United States, while remaining unchanged in Canada—a striking difference.

A major component of the U.S. output series[42] is based on a price index for semiconductors developed by BEA. This index employs a mixture of the hedonic technique for microprocessors and the matched model technique for memory chips through 1996. (Microprocessors, a type of integrated circuit, and memory chips are products of the semiconductor industry.) Beginning with 1996, a link was made to the appropriate BLS producer price index.

Canada does not collect prices for semiconductors, but rather uses BLS producer price indexes for several products within the semiconductor industry to proxy as deflators for integrated circuits and semiconductors and parts. The BLS producer price indexes for semiconductors are constructed using a matched model technique. As is the case for computers, the producer price indexes are adjusted by Statistics Canada for exchange rate variations.

Because the hedonic technique is used only to estimate missing prices for some microprocessor observations in the BEA application of the matched model procedure,[43] the difference in price behavior for the entire semiconductor industry is not primarily due to the BEA's use of the hedonic technique. A discussion with members of the BLS staff who work on the producer price indexes indicated that most of the difference between the BEA and BLS price indexes through 1996 was due to BEA's use of secondary price data covering important producers not included in the BLS indexes.[44] Beginning in 1997, BLS began using new secondary source data for its producer price indexes.

The very different price behavior of the BEA and BLS series, combined with the importance of this industry to understanding the productivity gap between the two countries, led us to explore further the impact of the use of different deflators. Semiconductors are produced in the manufacturing sector and are also consumed by industries in manufacturing, such as the computer industry.[45] Thus, the growth in semiconductor gross output increases value added of the manufacturing sector, while the growth in semiconductor consumption reduces it. To the extent that consumption and output of semiconductors are the same within a country's manufacturing sector and similar prices are used to deflate output and inputs, the choice of a deflator will not affect manufacturing value-added growth. In other words, if output and consumption were equal within a given country, the choice of deflators would not influence the productivity gap.

Such a complete offset is not the case, however, in either country. Our review of 1992 data from the input-output tables for the United States indicates that consumption of semiconductors in manufacturing is about two-thirds of output. Our corresponding review of the data from Canada indicates that 1992 consumption levels were 33 percent greater than out-

put. Because there is less than a full offset in the United States and more than an offset in Canada, the impact on value added from the use of different semiconductor deflators should not be dismissed.

To assess the impact of the different prices on the gap, we accepted the BEA choice of deflator for estimating semiconductor growth. We replaced the real semiconductor outputs and inputs in the Canadian real value-added series with values constructed with an exchange-rate-adjusted BEA price series.[46] The results of this simulation affected the annual growth of the productivity gap as follows:

| | *As published* | *Adjusted* |
|---|---|---|
| 1988–96 | 0.0 | 0.1 |
| 1988–92 | –1.6 | –1.6 |
| 1992–96 | 1.7 | 1.8 |

For the 1992–96 period, this adjustment increased the productivity gap by about 0.1 percentage point. The much more rapid price decline of the BEA price index makes both output and intermediate inputs grow faster. Because semiconductors occupy a greater share of Canadian manufacturing as an input rather than as an output, adjusted Canadian value-added output grows slower and contributes slightly to a widening of the gap.

In summary, the difference in techniques for estimating prices for information technology products in the two countries is not substantially affecting the gap in manufacturing productivity growth. For computers, the techniques are similar. The Canadians actually use the same prices as BEA, with the exception of their estimate of microcomputers and printers after 1992. Not surprisingly, the resulting price series for computers show similar major price declines. The general techniques and resulting price series for telephone switching equipment in the two countries are different. However, the importance of this product is relatively small in both countries and thus probably does not affect the aggregate manufacturing productivity gap. Finally, although the same general technique is used by both countries for semiconductors, the resulting prices are very different—primarily because the United States uses a BEA-produced deflator, while Canada uses the BLS producer price index. Our simulation indicated that using the same prices for semiconductors in both countries would have a slight impact on the manufacturing sector productivity gap.

## Labor input

Productivity measures for the United States and Canada are derived from data on hours and employment from different types of surveys—a potential source of at least part of the difference in growth of labor input. Total labor hours inputs are measured as the product of average hours and employment, and U.S.-Canada ratios represent the gaps in these measures. The importance of the growth of the gap in each of these measures in explaining the annual growth of the gap in total hours can be seen in the following tabulation:

| | *Total hours* | *Average hours* | *Employment* |
|---|---|---|---|
| 1988–98 | 0.1 | 0.2 | –0.1 |
| 1988–92 | 3.3 | .7 | 2.5 |
| 1992–98 | –1.9 | –.2 | –1.7 |

Positive values indicate faster growth (or slower decline) of the U.S. variable relative to the Canadian variable, thus widening the gap. Negative values, on the other hand, indicate that the U.S. variable either rose slower (or fell faster) than its Canadian counterpart, thus closing the gap. Looking at these ratios, one may easily conclude that the gap in employment between the two countries is responsible for the majority of the gap in total hours. In this section, we examine the methods underlying both average hours and employment and analyze the impact of using different types of surveys.

*Hours concept.* The appropriate labor input for measuring output per hour is hours worked, rather than hours paid. For the United States, the measure of hours at work excludes all forms of paid leave, but includes paid time to travel between job sites, coffee breaks, and machine downtime. Similarly, Canada's measure of hours worked excludes time lost due to strikes, holidays, vacations, illness, maternity leave, or personal reasons, but it includes normal hours, overtime, coffee breaks, on-the-job training, and time lost to unanticipated interruptions. For productivity measurement, a measure of the labor input of all employed persons is appropriate. All employed persons include production workers, nonproduction workers, and unpaid workers.[47]

*Primary data sources.* Total hours data for the United States are derived from the BLS series on average hours and employment underlying its quarterly productivity statistics. Statistics Canada publishes measures of total jobs and hours worked for total jobs.

The primary data source for the U.S. estimates of average hours paid for production workers is the BLS Current Employment Statistics (CES) survey, which is an establishment survey.[48] For the period from 1977 forward, average weekly hours paid for nonproduction workers are extrapolated using trends in the workweek of production workers from CES data and from BLS studies of wages and supplements in manufacturing.[49] These studies provide data from prior to 1978 on the regularly scheduled workweek of white-collar employees.[50] Data from the BLS Hours at Work Survey are used to convert average weekly hours paid to an hours-at-work basis.[51] In the United States, average hours data for self-employed workers are obtained from the household-based Current Population Survey (CPS).[52] In Canada, data on average hours worked (in-

cluding unpaid overtime) for all employed persons are collected in the Canadian Labor Force Survey, which also is a household survey.[53]

For the United States, employment data for production and nonproduction workers are obtained from the CES. For Canada, employment data for production and nonproduction workers are collected in the Canadian Annual Survey of Manufacturing, an establishment-based survey. However, this series is benchmarked to an adjusted version of employment from the Canadian Labor Force Survey, which causes the Canadian series to grow at a rate similar to that shown by data from the labor force survey.[54] In both countries, employment data for unpaid workers are obtained from labor force surveys.

*Differences in average hours.* Studies have shown that trends in average hours may differ considerably when they are derived from household labor force surveys as opposed to establishment surveys.[55] It is possible to compare trends of average hours from the two types of surveys by analyzing alternate data from the United States and Canada. In the United States, BLS collects data on average hours for wage and salary workers in the CPS,[56] as well as in its establishment survey. In Canada, too, average hours data are collected not only from a household survey, but also from an establishment survey, the Survey of Establishment Payroll and Hours (SEPH).[57] Using these alternative data sources, we estimated the U.S.-Canada gap in average hours from comparable data sources. There have been numerous methodological changes to the SEPH since 1990, and the sample size prior to 1998 was relatively small.[58] The simulation results for 1988–98 based on the Canadian establishment data are affected by these limitations.

The impact on the annual growth of the U.S.-Canada gap in average hours is shown in the following tabulation:

| | *Published data* | *Establishment data* | *Household data* |
|---|---|---|---|
| 1988–98 | 0.2 | 0.1 | 0.1 |
| 1988–92 | .7 | .3 | .4 |
| 1992–98 | –.2 | .0 | –.2 |

The results show that if both countries use source data from establishment surveys, the gap in U.S.-Canada average hours would grow more slowly than the published series for the 1988–92 period, and more rapidly for the 1992–98 period. Alternatively, if both countries use source data from household surveys, the gap in average hours would grow more slowly for the 1988–92 period, and about the same for 1992–98.[59] The largest change occurred during the 1988–92 period, where adopting the U.S. establishment basis reduced the gap in average hours by 0.4 percentage point, and adopting the Canadian household basis reduced the gap by 0.3 percentage point. Hence, the choice of the type of survey used does appear to affect the growth in the gap in average hours between the United States and Canada.

*Differences in employment.* Even though the United States and Canada both use establishment data to measure employment in the manufacturing sector, the Canadian data are benchmarked to a labor force survey. Employment trends estimated from a labor force survey often differ from employment trends estimated from an establishment survey. Using alternative data from the United States and Canada, one can estimate the impact of adopting the same survey types. We adjusted the published U.S. employment series to grow at the rate of the CPS and compared this series with the published Canadian measure. Alternatively, we adjusted the Canadian data to remove the household survey benchmark and then compared the data to the published U.S. series.[60]

The impact on the annual growth of the U.S.-Canada gap in employment is illustrated in the following tabulation:

| | *Published data* | *Establishment data* | *Household data* |
|---|---|---|---|
| 1988–98 | –0.1 | –0.2 | –0.1 |
| 1988–92 | 2.5 | 2.1 | 2.6 |
| 1992–98 | –1.7 | –1.7 | –1.9 |

The results show that if both countries had used employment data from an establishment survey, the gap in U.S.-Canada employment would have grown more slowly during the 1988–92 period, and it would have remained the same during the 1992–98 period. Alternatively, if both countries had used employment data from household surveys, the gap would have grown somewhat more rapidly during the 1988–92 period, and it would have declined more rapidly during the 1992–98 period.[61] Again, we noticed that the adjustment for the 1988–92 period was the most dramatic. During this period, shifting the Canadian employment series from a labor force basis to an establishment basis reduced the employment gap by 0.4 percentage point. For the other periods, the adjustments had relatively little effect.

*Comparing total hours and productivity.* Because total hours are contingent on trends in both average hours and employment, we combined the results of the analysis on these two measures.[62] Using the resulting alternate trends in total hours, we then re-estimated productivity growth. The following tabulation compares the annual growth of the productivity gap based on the published data with the gaps associated with using comparable methods to measure total hours in the two countries:

| | *Published data* | *Establishment data* | *Household data* |
|---|---|---|---|
| 1988–98 | 0.6 | 0.8 | 0.7 |
| 1988–92 | –1.6 | –.7 | –1.4 |
| 1992–98 | 2.1 | 1.8 | 2.2 |

Adopting comparable methods for either country led to a small increase in the productivity gap over the 1988–98 period. For the 1992–98 period, however, adopting the U.S. establishment basis decreases the gap, while adopting the Canadian labor force survey basis increases the gap. Notice that, particularly for the 1988–92 period, shifting the Canadian hours series to a U.S. basis results in the greatest change in the productivity gap, reducing it by 0.9 percentage point.

From our analysis, we conclude that measurement procedures used by the two countries to construct labor input are contributing to the productivity gap. However, if comparability is achieved, the adjustment to the gap will depend on the basis selected.[63] In the United States, BLS favors using hours data from the establishment survey in estimating U.S. productivity growth. Statistics Canada has chosen not to use establishment survey data to measure hours. To the extent that this choice implies limitations in the alternative establishment-based data from Canada, we are reluctant to interpret our findings as precise measures of the impact of using different survey types on the U.S.-Canada productivity gap.

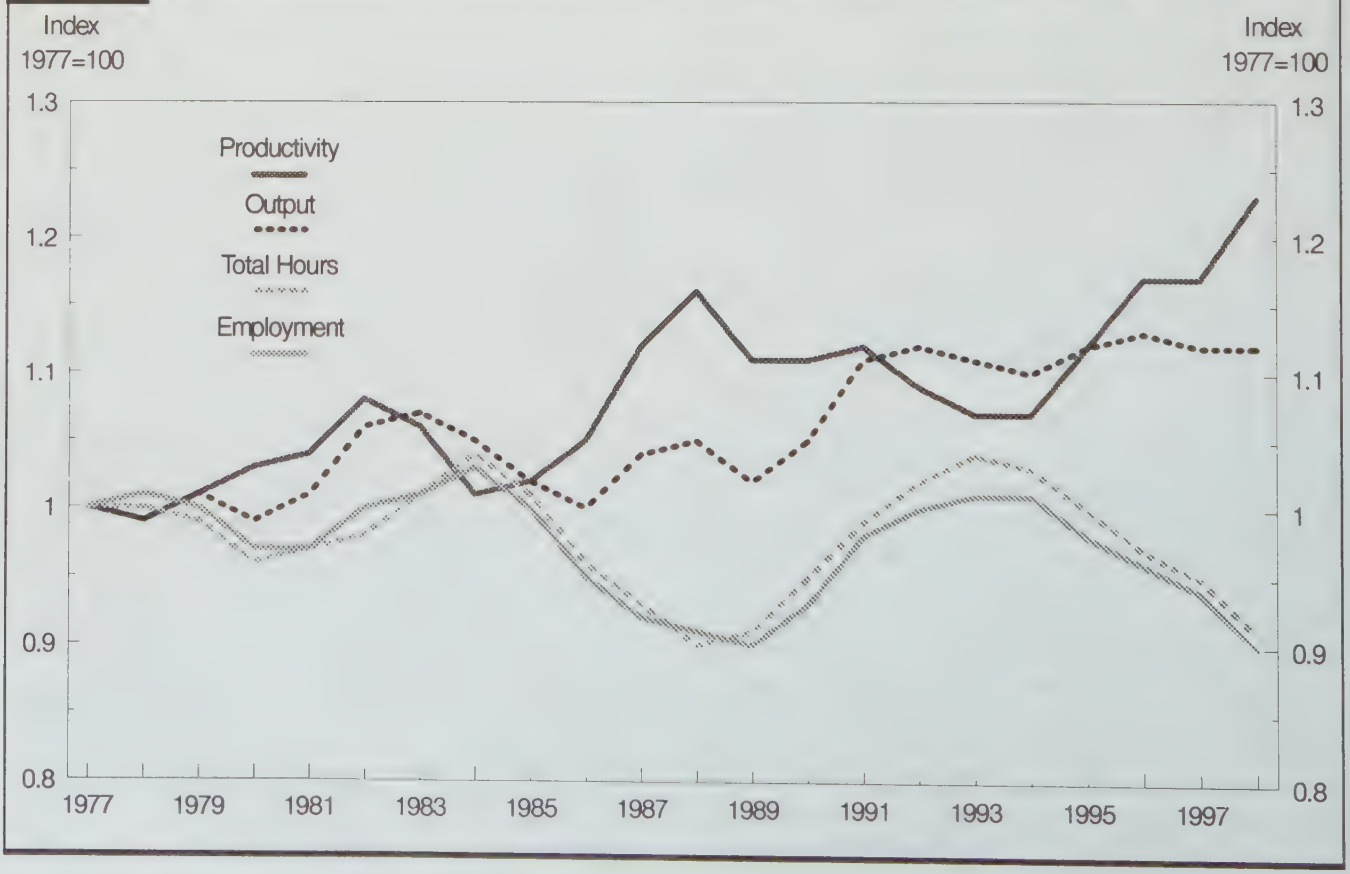
## Real Factors

Since 1979—a peak year for output in each country—there has been a gap in relative productivity performance between the United States and Canada. However, there have been two major periods in which the gap narrowed before increasing again. From 1982 to 1984, Canadian productivity grew faster than U.S. productivity, contributing to a decline in the gap before a slower growth rate in Canada increased it again through 1988. From 1988 to 1992, the gap began to decline again. Since the early 1990s, however, there has been a much more rapid increase in U.S. productivity relative to Canadian productivity.

Chart 2 presents U.S.-Canada ratios of indexes of output per hour, as well as indexes of output and labor input. These ratios represent the gap that exists for each variable. An increase in a ratio indicates faster growth (or slower decline) of that variable in the United States relative to Canada. A declining ratio indicates that the U.S. variable either rose more slowly or fell more rapidly than the Canadian variable. Although the behavior of the productivity gap between 1988 and 1998 can be explained in part by the different growth rates of output, the interesting finding is that the gap in productivity performance is a near mirror image of the gap in employment. The increase in the productivity gap between 1992 and 1998 is driven by more rapid growth in Canadian employment.

The following tabulation shows the annual growth in the U.S.-

**Chart 2. Ratio of U.S.-Canada indexes of output per hour and related series, 1977–98**



Canada ratios of output per hour, output, and hours:

| | *Output per hour* | *Output* | *Hours* |
|---|---|---|---|
| 1988–98 | 0.6 | 0.7 | 0.1 |
| 1988–92 | –1.6 | 1.6 | 3.3 |
| 1992–98 | 2.1 | .1 | –1.9 |

It can readily be seen that over the 1988–98 period, productivity growth in the United States was 0.6 percentage point greater than it was in Canada. However, as depicted in Chart 2, the two subperiods reveal more dynamic results. The growth of the ratio of U.S.-Canadian output per hour compared with the growth in the U.S.-Canada ratios for output and hours, underscores the importance of relative output and labor movements in each country. For the 1988–98 period, the productivity gap appears to be resulting mainly from a gap in output. However, for the two subperiods, the gap in hours is the force behind the productivity differentials.

As discussed earlier, the gap in employment is mainly responsible for the gap in hours. Because measurement differences only play a small role in explaining the U.S.-Canada employment gap, there also are real economic factors driving the gap in hours.

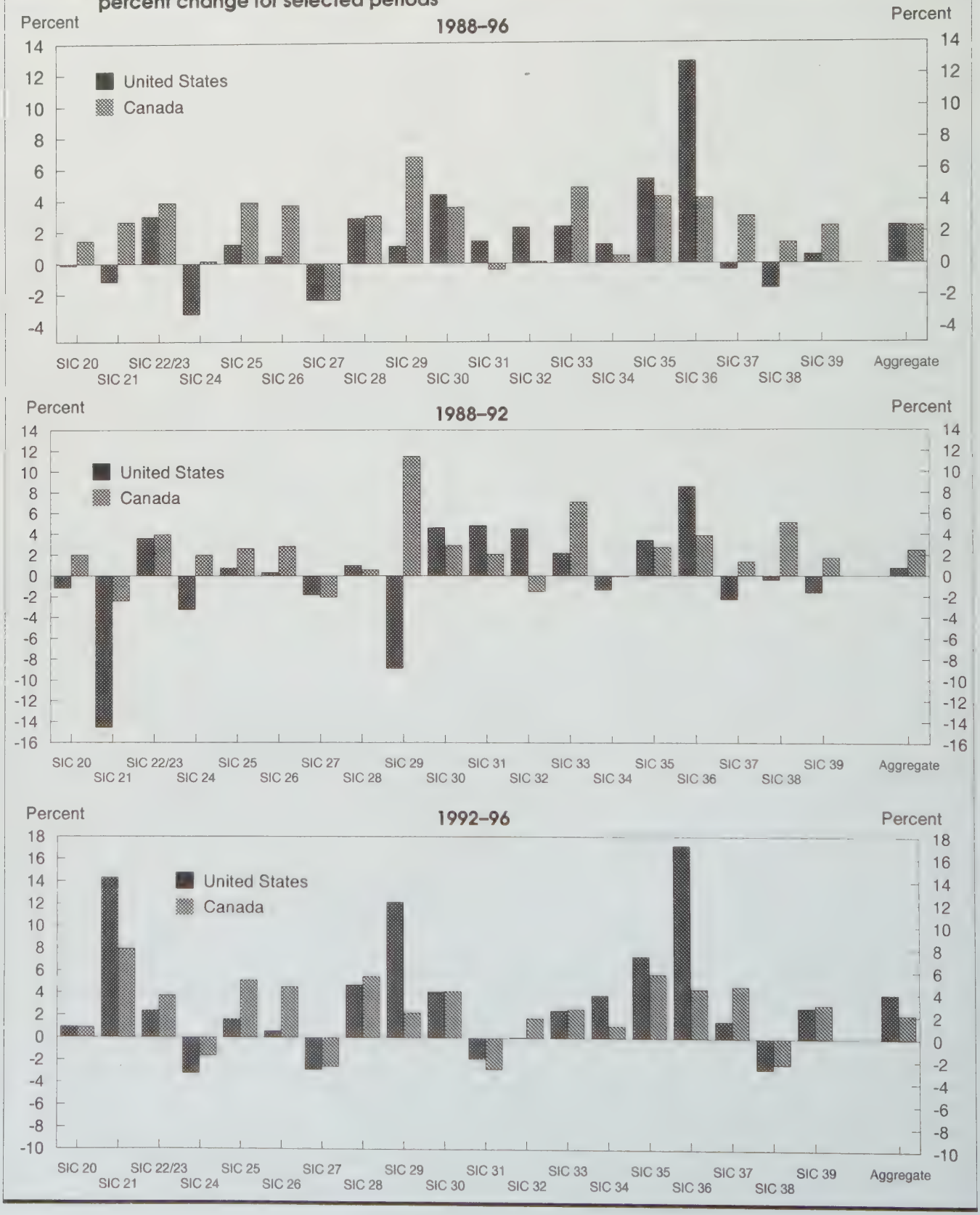
A decomposition of productivity into its input and output components provides useful information concerning the U.S.-Canadian productivity gap. However, additional information can be gained by looking at the productivity performance of the individual industries that make up the manufacturing sector. Industry-level data allow us to identify industries that contribute substantially to a country's growth in manufacturing output per hour.

*Industry measures.* Because BLS has obtained data for both Canada and the United States, we are able to measure productivity trends through 1996 for approximately 19 two-digit industries within manufacturing. Using these data, we compare each country's productivity performance by industry and then analyze the contribution made by specific industries to the growth in manufacturing output per hour. These data are consistent with the aggregate manufacturing series. To the extent possible, we have adjusted the Canadian two-digit industry data to conform to the 1987 U.S. Standard Industrial Classification (US-SIC87).[64] For brevity, we refer to industries with a short rendition of the full title given in the *Standard Industrial Classification Manual: 1987*. (A mapping of the full

**Exhibit 1. Mapping of abbreviations and full titles of manufacturing industries in the 1987 U.S. Standard Industrial Classification system**

| SIC code | Short title | Full title |
|---|---|---|
| 20 | Food | Food and kindred products |
| 21 | Tobacco | Tobacco products |
| 22/23 | Textiles and apparel | Textile mill products, and apparel and other finished products made from fabrics and similar materials |
| 24 | Lumber | Lumber and wood products, except furniture |
| 25 | Furniture | Furniture and fixtures |
| 26 | Paper | Paper and allied products |
| 27 | Printing | Printing, publishing, and allied industries |
| 28 | Chemicals | Chemicals and allied products |
| 29 | Petroleum | Petroleum refining and related industries |
| 30 | Rubber and plastic | Rubber and miscellaneous plastic products |
| 31 | Leather | Leather and leather products |
| 32 | Stone and clay | Stone, clay, glass and concrete products |
| 33 | Primary metals | Primary metal industries |
| 34 | Fabricated metals | Fabricated metal products, except machinery and transportation equipment |
| 35 | Machinery and computers | Industrial and commercial machinery and computer equipment |
| 36 | Electronics | Electronic and other electrical equipment and components, except computer equipment |
| 37 | Transportation equipment | Transportation equipment |
| 38 | Instruments | Measuring, analyzing, and controlling instruments; photographic, medical, and optical goods; watches and clocks |
| 39 | Miscellaneous | Miscellaneous manufacturing industries |

**Chart 3.** U.S. and Canadian productivity growth in manufacturing by industry, annual average percent change for selected periods



titles and their abbreviated versions is shown in exhibit 1 on page 41.)

*Productivity by industry.* Chart 3 presents a comparison of growth in output per hour for 19 industries over the 1988–96 period (top panel) and two subperiods (bottom two panels). Over the longer period, growth in output per hour in the United States was particularly strong in the electronics industry and in the machinery and computers industry. The rubber and plastics industry can also be considered a strong performer in the United States. However, over the same period, the lumber, printing, and instruments industries recorded the poorest performances. In Canada over the 1988–96 period, the petroleum and primary metals industries showed the greatest growth in output per hour, while the machinery and computers industry and the electronics industry also had strong growth over this period. Canada has experienced declining productivity growth in the printing, lumber, and leather industries.

For the 1992–96 subperiod, the United States experienced strong productivity growth in the tobacco and petroleum industries, as well as the electronics industry and the machinery and computers industry. Within this subperiod, the lumber, printing and instruments industries continued to have the most significant declines in growth in output per hour. In Canada, the tobacco industry and the machinery and computers industry are also productivity leaders, along with the chemicals industry. For this subperiod, productivity growth declined most significantly in the printing and leather industries.

When comparing industry performance between countries, we found that over the 1988–96 period, the United States demonstrated stronger productivity growth than Canada in 6 of the 19 industries. The largest gap between U.S. and Canadian growth in output per hour appears in the electronics industry and in the stone and clay industry. Canada demonstrates faster productivity growth in 13 of the 19 industries. The largest differences appear in the petroleum, tobacco and transportation equipment industries. Over the 1992–96 period, the United States demonstrated superior performance in 8 of the industries, while Canada demonstrated stronger growth in 11 industries. The United States outperformed Canada most notably in the electronics and petroleum industries, while Canada outperformed the United States most notably in the paper, furniture, and transportation equipment industries.

Chart 3 enables us to identify differences in productivity performance across industries within each country and to compare an industry's performance between the two countries. However, in order to assess an industry's contribution to aggregate productivity growth, the industry's relative importance must be taken into account.

*Productivity growth by industry.* To examine the contribution made by an industry to the growth in manufacturing output per hour, we weighted the industry's productivity growth rate to reflect the industry's relative importance in the manufacturing sector. In the case of measures of output per hour, a relevant weight is the industry's share of the manufacturing sector's labor hours.

Determining the contribution made by an industry to manufacturing productivity and to the gap between the two countries is not a precise determination. Further, it should be noted that some industry contributions are negative; thus, positive contributions from other industries will sum to more than 100 percent. However, we estimated these contributions simply to identify the industries that are most important to productivity growth in each country.[65] We caution against interpreting the

**Table 1.** Contributions to growth in manufacturing output per hour for the United States and Canada, 1988–96

| Industry (US-SIC87) | 1988–96 | | 1988–92 | | 1992–96 | |
|---|---|---|---|---|---|---|
| | United States | Canada | United States | Canada | United States | Canada |
| Food | .0 | .08 | –.10 | .14 | .03 | .04 |
| Tobacco | .0 | .0 | –.03 | .0 | .01 | .01 |
| Textiles and apparel | .11 | .14 | .30 | .18 | .06 | .11 |
| Lumber | –.06 | –.05 | –.12 | –.07 | –.04 | –.04 |
| Furniture | .01 | .06 | .02 | .04 | .01 | .06 |
| Paper | .01 | .09 | .01 | .09 | .01 | .10 |
| Printing | –.09 | –.07 | –.14 | –.08 | –.07 | –.07 |
| Chemicals | .07 | .06 | .05 | .02 | .08 | .11 |
| Petroleum | .0 | .02 | –.07 | .05 | .03 | .01 |
| Rubber and plastics | .10 | .07 | .20 | .06 | .06 | .07 |
| Leather | .0 | .0 | .03 | .01 | .0 | –.01 |
| Stone and clay | .03 | .0 | .12 | –.02 | .0 | .02 |
| Primary metal | .04 | .11 | .08 | .20 | .03 | .05 |
| Fabricated metal | .04 | .02 | –.09 | .0 | .09 | .03 |
| Machinery and computers | .27 | .14 | .34 | .10 | .25 | .16 |
| Electronics | .51 | .12 | .67 | .14 | .44 | .10 |
| Transportation equipment | –02 | .17 | –.21 | .09 | .04 | .24 |
| Instruments | –.03 | .01 | –.02 | .02 | –.04 | .0 |
| Miscellaneous | .01 | .03 | –.03 | .04 | .02 | .02 |

**Table 2. Industry contribution analysis, United States and Canada, 1988–96**

| Industry (US-SIC87) | 1988–96 | | 1988–92 | | 1992–96 | |
|---|---|---|---|---|---|---|
| | United States | Canada | United States | Canada | United States | Canada |
| **Machinery & computers** | | | | | | |
| Contribution | 0.27 | 0.14 | 0.34 | 0.10 | 0.25 | 0.16 |
| Output per hour growth | 5.36 | 4.25 | 3.40 | 2.75 | 7.37 | 5.77 |
| Output growth | 5.61 | 4.46 | 1.21 | –3.87 | 10.20 | 13.51 |
| Hours growth | .23 | .72 | –2.12 | –4.94 | 2.64 | 6.71 |
| Labor share | 11.29 | 7.21 | 10.91 | 6.54 | 11.17 | 6.96 |
| **Transportation equipment** | | | | | | |
| Contribution | –.02 | .17 | –.21 | .09 | .04 | .24 |
| Output per hour growth | –.40 | 2.99 | –2.29 | 1.34 | 1.52 | 4.67 |
| Output growth | –1.78 | 3.02 | –5.33 | –2.26 | 1.89 | 8.59 |
| Hours growth | –1.39 | .03 | –3.11 | –3.56 | .36 | 3.75 |
| Labor share | 10.09 | 12.50 | 10.19 | 12.13 | 9.77 | 12.78 |
| **Electronics** | | | | | | |
| Contribution | .51 | .12 | .67 | .14 | .44 | .10 |
| Output per hour growth | 12.79 | 4.15 | 8.55 | 3.88 | 17.21 | 4.43 |
| Output growth | 12.25 | .75 | 4.80 | –1.59 | 20.22 | 3.15 |
| Hours growth | –.48 | –3.17 | –3.45 | –4.62 | 2.57 | –1.71 |
| Labor share | 8.86 | 5.99 | 8.58 | 6.40 | 8.53 | 5.91 |

NOTE: Contributions in table 1 have been normalized to sum to one; therefore, the product of the shares and productivity growth will not necessarily equal the contribution.

results as exact estimates of the contributions.

Each industry's contribution to productivity growth in aggregate manufacturing is shown in table 1 (page 43). Notice that a low positive productivity growth within an industry can contribute considerably to aggregate productivity performance because of a large weight. The food industry in Canada during the 1988–92 period is an example. Conversely, a relatively high productivity growth rate combined with a small relative importance leads to a small contribution. The tobacco industry in both countries between 1992 and 1996 is an example.

Over the 1988–96 period, two industries stand out as top contributors to U.S. productivity growth—the electronics industry and the machinery and computers industry. The textiles and apparel industry also appears to contribute significantly to U.S. performance over this period. These industries, along with the transportation equipment industry, were also the largest contributors in Canada. The greatest differences in contributions between the two countries are observed for the electronics, the transportation equipment, and the machinery and computers industries.

For the 1992–96 period, the electronics industry and the machinery and computers industry remained dominant forces in the United States, while the transportation equipment and machinery and computers industries contributed the most to productivity growth in Canada. The chemicals industry and the fabricated metals industry in the United States, and the chemicals industry and the textiles and apparel industry in Canada also are significant contributors. During this period, the largest differences between the countries were for the electronics and transportation equipment industries.

Table 2 presents some details underlying the contributions of three key industries. The machinery and computer industry is one of the major contributors to productivity growth in both the United States and Canada, although the contribution in the United States is considerably larger. Over all three periods, the two countries' productivity performance was fairly similar for this industry, but the industry's importance was much larger in the United States. Productivity growth in this industry was somewhat stronger in the United States because of stronger growth in output and slower growth in hours over the entire 1988–98 period; from 1992–96, more rapid growth in hours in Canada offset its advantage in output growth.

The transportation equipment industry contributed significantly more to manufacturing sector productivity in Canada than in the United States. Given that this industry has a relatively large but similar labor share in both countries, the difference in contribution is due to the Canadian industry experiencing much higher productivity growth than its U.S. counterpart—the United States actually experienced negative productivity growth over the entire 1988–96 period. In Canada, output and hours in the transportation equipment industry have been growing faster than in the United States; however, output has outpaced hours. This strong performance in the Canadian transportation equipment industry helped reduce the gap in U.S.-Canadian manufacturing productivity.

The largest disparity in contribution between the two countries was in the electronics industry. This is a result of the superior productivity growth that the U.S. industry demonstrated, compared with its Canadian counterpart, as well as the fact that the U.S. labor share is about 50 percent larger than the Canadian share. In the United States, output has far outpaced the growth in hours, and output in the United States has been growing significantly faster than in Canada. During the 1992–96 period, output in the United States electronics industry grew at a phenomenal rate of 20 percent per year, compared with 3 percent in Canada.

In summary, the transportation equipment and the machinery and computer industries had an offsetting impact on the gap over the period covered by this study. The small advantage in importance of the transportation equipment industry combined with stronger productivity growth in Canada was offset by the considerably larger share and somewhat stronger productivity growth enjoyed by the United States in the machinery and computers industry. The real contribution disparity occurs in the electronics industry. Both a larger share and much stronger productivity growth in the United States caused the electronics industry to widen the U.S.-Canada gap in manufacturing productivity.

IN THIS ARTICLE, WE REVIEWED the procedures BLS uses to produce international productivity comparisons, along with the methods used by each country's statistical agency to compile the underlying data used by BLS. We explored differences between the two countries in industrial classification, concepts and estimation of real value-added output (including valuation of prices, index aggregation formula, treatment of software and information technology deflation), and the estimation of labor hours worked.

In general, we found that the methods used by the two countries to construct the components of output per hour are quite similar. Although some differences exist, they do not appear to be substantially affecting measured productivity growth over the study period. Some differences tend to reduce the gap, while other measurement differences increase the gap. In our exploration of deflation techniques used to construct real value-added measures for certain products within the information technology sector, we found that there are some important similarities in methods but a substantive difference in the actual implementation of the semiconductor pricing methodology. When we combined our findings regarding all nonlabor methods reviewed, we found that they made only a small contribution to the size of the gap. The following tabulation of annual growth rates summarizes our findings with respect to the effect on the productivity gap of these measurement differences:

| | *1988–96* | *1988–92* | *1992–96* |
|---|---|---|---|
| Published productivity gap | 0.0 | –1.6 | 1.7 |
| Measurement issue: | | | |
| Industrial classification .. | .1 | .2 | .1 |
| Software ..... | –.1 | –.2 | –.1 |
| Semiconductor prices ..... | .0 | .0 | .1 |
| Adjusted productivity gap . | .0 | –1.7 | 1.8 |

Although real factors are responsible for the majority of differences in labor hours, hours derived from establishment surveys and labor force surveys behave differently, and thus have an impact on productivity comparisons. The United States favors the use of establishment survey data for measuring hours used for BLS productivity statistics. Statistics Canada has chosen not to use establishment survey data to measure hours. To the extent that this choice implies limitations in the alternative establishment-based data from Canada, we are reluctant to interpret our findings as precise measures of the impact of using different survey types on the U.S.-Canada productivity gap.

Among the real factors, the gap was substantially affected by the different growth rates of manufacturing employment in the two countries. Further, as other researchers have found, our review of productivity data at the two-digit level indicated that a substantial amount of the difference in productivity performance can be explained by the outstanding productivity growth in the information technology sector of the U.S. economy. In the United States, the electronics industry and the machinery and computers industry were the largest contributors to productivity growth, while in Canada, the transportation equipment industry played a major role in holding down the size of the gap. □

## Notes

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[1] "Investigating the Canada-US Productivity Gap: BLS Methods and Data," presented at the Centre for the Study of Living Standards Conference on the Canada-US Manufacturing Productivity Gap, Ottawa, January 21-22, 2000. Conference papers can be obtained on the Internet at **http://www.csls.ca**, under the heading "recent events." More current data are included in the present article, as well as substantive revisions in the two countries' series that have taken place since January 2000.

[2] The list is not exhaustive but includes issues thought to be most important. It should be noted that there are limitations associated with the quality of

the particular data available for estimating the variables used in productivity measurement, as well as with the practical procedures that must be used when data are not available. It is not feasible to review all of the limitations. For example, accurate price deflators necessary to determine the real input of purchased services are rare. Because this problem is not unique to either country, we did not attempt to explore the issue.

[3] A standardized system being adopted, at least in part, by many countries is the *System of National Accounts 1993*, which has been undertaken under the joint responsibility of the United Nations, the International Monetary Fund, the Commission of the European Communities, the Organization for Economic Co-operation and Development, and the World Bank. See *System of National Accounts 1993*, Series F, Number 2 (United Nations Statistics Division, 1993); for more information, visit the United Nations Statistics Division website, on the Internet at **http://www.un.org/Depts/unsd/**.

[4] *Standard Industrial Classification Manual: 1987* (Executive Office of the President, Office of Management and Budget, 1987).

[5] More information on Canada's 1980 Standard Industrial Classification system can be found on the Internet at **http://www.statcan.ca/english/Subjects/Standard/standard_classifications.htm**.

[6] In 1997, Canada completed a major revision to the national accounts. This historical revision did not result in any changes to the classification of the manufacturing sector or to two-digit industries within manufacturing; however, the numbering structure for industries within manufacturing was modified. Both countries, along with Mexico, are in the process of converting to a common industrial classification known as the North American Industrial Classification System (NAICS). At this time, manufacturing data on a NAICS basis are scheduled to be released in Spring 2001 for Canada and not before 2004 for the United States.

[7] There are several other components of Canadian manufacturing that are not in U.S. manufacturing that we were unable to adjust for. These include portions of photo finishing (C-SIC80 2821), vehicle engine repair services (C-SIC80 3081, 3261), and clay products (C-SIC80 3511, 3512, 3591).

[8] Output and hours for the Canadian logging industry (C-SIC80 w-5) were obtained from Statistics Canada. Output and hours for the five-digit US logging industry were obtained from the BLS Division of Industry Productivity Studies. The consistency in aggregation theorem was used to construct the adjusted series. (See W. E. Diewert, "Superlative Index Numbers and Consistency in Aggreagation," *Econometrica*, July 1978, pp. 883–900.) Under the 1997 North American Standard Industrial Classification System (NAICS), the logging industry will not be included in the manufacturing sector.

[9] For more information, visit BEA's website, on the Internet at **http://www.bea.doc.gov/**.

[10] Sherlene K. S. Lum, Brian C. Moyer, and Robert E. Yuskavage, "Improved Estimates of Gross Product by Industry for 1947–98," *Survey of Current Business*, June 2000, pp. 24–54. Note that prior to the June 2000 revisions, the U.S. data relied upon information from the 1987 input-output table. This raised concern at the Conference regarding comparability with Canadian data. The authors addressed that point in a revised paper prepared for the Conference volume.

[11] Statistics Canada is the Canadian national statistical agency; the agency publishes statistics organized into three broad subject matter areas: demographic and social, socioeconomic, and economic. For more information, visit the official Statistics Canada website, on the Internet at **http://www.statcan.ca/start.html**.

[12] See "Gross Domestic Product by Industry," Catalogue no. 15-001-XPB, (Statistics Canada, October 1997) pp. vii-xxvi.

[13] In both countries deflation is conducted at the most detailed level possible. In the United States, current dollar gross output is deflated primarily using BLS producer price indexes. Notable exceptions are price indexes constructed by BEA for computers, telephone-switching equipment, selected semiconductor products, and government purchases. Intermediate purchases are deflated with prices based largely on those used to prepare constant dollar gross output and imported intermediate inputs are deflated mainly using BLS import price indexes. In Canada, current dollar gross output and intermediate purchases are deflated with producer price indexes. In general, the two countries use similar deflation techniques to measure real output and inputs.

[14] The *System of National Accounts 1993* recommends the use of basic prices or modified basic prices to value gross output. Prior to 2000, Statistics Canada valued output at factor costs.

[15] Kishori Lal, "Value Added by Industry: A Problem of International Comparison," OECD Meeting of National Accounts Experts, Paris, (Statistics Canada, September 21–24, 1999).

[16] Prior to 1987, subsidies in U.S. manufacturing never accounted for more than .05 percent of nominal gross output in manufacturing.

[17] BEA implements the aggregation procedure at a product level while Statistics Canada implements it at a higher industry level. Because the adoption of the new aggregation formula by the Canadians led to small overall differences at the manufacturing level, it is presumed that implementing the method at a more detailed level would also have a small impact on the aggregate manufacturing sector.

[18] Robert E. Yuskavage, "Improved Estimates of Gross Product by Industry, 1959–94," *Survey of Current Business*, August 1996, pp. 133–155, especially p. 138.

[19] *Ibid.*, pp. 138–39.

[20] For any given interval between base periods, Canada constructed a fixed-weight Laspeyres output index. Since 1981, the base year of this index was updated every 5 years (1981, 1986, and 1992). See Kishori Lal, "Remaining Differences Between the 1997 Canadian System of National Accounts and the 1993 International System of National Accounts," OECD Meeting of National Accounts Experts, Paris, France, September 22–25, 1998 (Statistics Canada), p 23.

[21] Software enters the national accounts as purchases of software and as own-account software production. Own-account software refers to software produced by a business or government for its own use. Purchased software is produced by the computer programming and the prepackaged software industries (US-SIC87 7371 and 7372) in the service sector.

[22] For a detailed discussion of the revision, see Brent R. Moulton, Robert P. Parker and Eugene P. Seskin, "A Preview of the 1999 Comprehensive Revision of the National Income and Product Accounts: Definitional and Classificational Changes," *Survey of Current Business*, August 1999, pp. 7–20.

[23] *System of National Accounts 1993* (United Nations Statistics Division, 1993); see also note 3.

[24] Nominal GPO is measured as the sum of the distribution by industry of the components of gross domestic income (GDI). The new treatment of software as fixed investment increased proprietor's income and profit within GDI by eliminating the deductions for software purchases and by adding the value of the production of own account software. These effects were only partially offset by the deduction of the consumption of fixed capital on both purchased software and own-account software production. Thus, this change increased nominal GDI. To calculate real GPO, nominal intermediate purchases are constructed as gross output less GDI. The new treatment of software increased both gross output and GDI; however, the impact on GDI was greater, and thus the result was decreased nominal intermediate purchases. Consequently, real GPO was revised upward slightly.

[25] See Lum, Moyer, and Yusgavage, "Improved Estimates of Gross Domestic Product, 1947–98," June 2000.

[26] At the industry level, software accounts for slightly larger shares in some industries: 2.7 percent in printing, publishing and allied industries (US-SIC87 27) and in industrial and commercial machinery and computer equipment (US-SIC87 35); 2.2 percent in measuring, analyzing, and controlling instruments, photographic, medical and optical goods, watches and clocks (US-SIC87 38); and 2 percent in electronic and other electrical equipment and components, except computer equipment (US-SIC87 36).

[27] Consistency in aggregation theorem; see Diewert, "Superlative Index Numbers," July 1978.

[28] Statistics Canada.

[29] This specification is used in *Information Technology in the Service Society*, a report prepared by the National Research Council (Washington, DC, National Academy Press, 1994); see p. 23, note 1.

[30] See Robert E. Yuskavage, "Gross Product by Industry Price Measures, 1977–96," *Survey of Current Business*, March 1998, pp. 17–25, especially p. 22. In the United States, within the US-SIC87 two-digit industry electronic and other electrical equipment and components, except computer equipment, the prices of more than half the value of the products' shipments fell somewhat or greatly between 1992 and 1996. However, most did not fall to the extent the information technology items we reviewed fell. Further, by 1996, the information technology products that we reviewed in this industry made up about a third of the output of the electronics industry.

[31] See Bruce T. Grimm, "Price Indexes for Selected Semiconductors, 1974–96," *Survey of Current Business*, February 1998, pp. 8–24; see p. 9 for a brief discussion of the issues associated with the measurement of output and prices for high-tech goods.

[32] Andrew A. Wyckoff, "The Impact of Computer Prices on International Comparisons of Labour Productivity," in *Economics of Innovation and New Technology*, vol. 3 (Amsterdam, Overseas Publishers Association, 1995), pp. 277–93, especially page 282.

[33] See, for example, Ernst R. Berndt and Zvi Griliches, "Price Indexes for Microcomputers," in Murray F. Foss, Marilyn E. Manser, and Allan H. Young, eds., *Price Measurements and Their Uses*, National Bureau of Economic Research Studies in Income and Wealth, no. 57 (Chicago, University of Chicago Press, 1993), pp. 63–93, especially table 2.1.

[34] The price data are not strictly comparable because the U.S. implicit price series is a chained annual-weighted price index; the Canadian implicit price index is not.

[35] Computers, storage devices, terminals, and peripherals (US-SIC87 3571, 3572, 3575, and 3577) in the United States and electronic computing and peripheral equipment (C-SIC80 3361) in Canada. In 1992 and 1996, respectively, these industries accounted for 2.1 percent and 2.6 percent of manufacturing nominal shipments in the United States. The comparable figures for Canada were 1.2 percent and 1.6 percent.

[36] The U.S. price index is calculated by weighting the respective industry price changes by shipments shares.

[37] BEA constructed a hedonic price index for personal computers in 1987.

[38] Telephone switching equipment (US-SIC87 36611) in the United States accounted for about 41 percent of telephone and telegraph apparatus (US-SIC87 3661) in 1992. We do not have information on the relative importance of telephone switching equipment in Canada, but telephone equipment accounted for 90 percent of telecommunications equipment (C-SIC80 3351) in 1992 (Statistics Canada). In 1992 and 1996, the shares of nominal shipments for telephone and telegraph apparatus within the manufacturing sector in the United States were 0.7 percent and 0.9 percent, respectively. The comparable values in Canada for C-SIC80 3351 were 1.3 percent and 1.2 percent.

[39] After 1996, the BEA price series were linked to the appropriate BLS producer price index series. The producer price index series are based upon a matched model technique.

[40] To estimate the possible magnitude of the impact from the different techniques, we accepted the BEA choice of deflator for estimating telecommunications equipment growth. We replaced the real telecommunications equipment outputs and inputs in the Canadian real value added series with values constructed with an exchange-rate adjusted BEA price series. The results for the 1992–96 period indicated that the productivity gap between the United States and Canada would be slightly reduced (0.1 percent). Telephone switching equipment, where the different techniques are employed, accounts for less than half of the telephone and telegraph apparatus industry in the United States. We would expect the impact, therefore, to be even smaller than 0.1 percent.

[41] In the United States, the industry group is semiconductors and related devices (US-SIC87 3674). In Canada, two components of the electronic parts and equipment industry (C-SIC80 3352), semiconductors and integrated circuits, are equivalent to the U.S. industry and will be referred to as semiconductors. Semiconductors account for 72 percent of the output in C-SIC80 3352 in 1996 (Statistics Canada). In 1992 and 1996, the shares of nominal output of semiconductors within the manufacturing sector in the United States were 1.1 percent and 1.9 percent, respectively. The comparable shares in Canada for C-SIC80 3352 were 1.2 percent and 1.4 percent.

[42] The industry is US-SIC87 36741, integrated micro circuits (including semiconductor networks, microprocessors, and MOS memories).

[43] The hedonic method was used to adjust for missing prices for matched models for 32 percent of one type of microprocessor and 7 percent of a second type of microprocessor. See Bruce T. Grimm, "Price Indexes for Selected Semiconductors, 1974–96," p.22.

[44] For 1996, the BEA implicit price index for shipments of industry US-SIC87 3674 is 32.6; the BLS producer price index for that industry is 86.2 (both with 1992 = 100.0).

[45] Consumption may be from semiconductors produced in the domestic manufacturing sector or from imports.

[46] Real semiconductor output growth was removed from real value added and real semiconductor input growth was added to real value added. Then real gross output and inputs of semiconductors were re-estimated with an exchange-rate-adjusted BEA price index. The adjusted real output growth was added and the adjusted input growth was subtracted to arrive back at a measure of real value added for Canadian manufacturing. Information on the procedures used to adjust the Canadian data is available from the authors upon request. The consistency in aggregation theorem was used to make this adjustment; see Diewert, "Superlative Index Numbers," July 1978.

[47] Unpaid family workers are negligible in U.S. manufacturing and are not included in the BLS estimates of U.S. employment and hours. The Canadians use the term "other-than-paid" for the concept of unpaid workers.

[48] In this survey, jobs rather than persons are counted. Hours of labor input are treated as homogeneous units; no distinction is made among workers with different skill levels or wages. For more information on the Current Employment Statistics (CES) program, see *BLS Handbook of Methods*, Bulletin 2490 (Bureau of Labor Statistics, April 1997), pp. 15–31.

[49] See *Employee Compensation in the Private Nonfarm Economy, 1977*, Summary 80–5 (Bureau of Labor Statistics, April 1980).

[50] The direction and magnitude of any bias created by this estimation technique is not clear. Data from the CPS suggest that nonproduction workers may work more hours than production workers, in which case the estimation technique may understate hours. (See Marilyn Manser, "U.S. Labor Market Data and Issues in Comparing Goods and Services,"prepared for the 10th meeting of the Voorburg Group on Service Statistics, September 11–15, 1995.) However, the fact that production workers tend to work more paid overtime relative to nonproduction workers may cause the use of production worker hours in the estimation process to offset the issue of unpaid hours. For a bias to exist, there would have to be some change in these relationships.

[51] For nonproduction workers, the ratio hours-worked to hours-paid is only available for durable and nondurable groups within manufacturing. Therefore, industry data on hours paid are adjusted with a ratio for the appropriate group. For information on the Hours at Work Survey, see Kent Kunze, "A New BLS Survey Measures the Ratio of Hours Worked to Hours Paid," *Monthly Labor Review*, June 1984; see also *BLS Handbook of Methods*, Bulletin 2490 (Bureau of Labor Statistics, April 1997), pp. 89–102.

[52] For more information on the Current Population Survey (CPS), see *BLS Handbook of Methods*, Bulletin 2490, pp. 4–14.

[53] The Canadian Labour Force Survey (LFS) underwent a comprehensive revision in January 2000. See "Improvements in 2000 to the LFS," on the Internet at **www.statcan.ca/english/concepts/method.htm**.

[54] Labor force survey data are adjusted to a jobs basis. For completeness, estimates for Armed Forces, the Territories, and Indian reserves are added to the LFS data. Industry data are adjusted to remove own-account construction and noncommercial activities.

[55] Katharine G. Abraham, James R. Spletzer, and Jay C. Stewart, "Divergent Trends in Alternative Wage Series," in John Haltiwanger, Marilyn E. Manser, and Robert Topel, eds., *Labor Statistics Measurement Issues*, National Bureau of Economic Research Studies in Income and Wealth, no. 60 (Chicago, University of Chicago Press, 1998), pp. 293–324.

[56] The CPS collects data on a per-person basis, while the CES collects data on a per-jobs basis. Using data on multiple jobholders in manufacturing, we constructed an adjusted CPS series that converts the hours data to a jobs basis. This is consistent with efforts employed by Statistics Canada to convert the LFS data to a jobs basis. For 1998, this adjustment reduces the CPS average weekly hours for wage and salary workers from 42.2 to 41.5. Growth rates for the adjusted CPS series do not differ greatly from those of the published CPS.

[57] The SEPH collects average hours paid, rather than hours worked. Trends in SEPH data are a reasonable approximation for this comparison if it is reasonable to assume that the ratio of hours worked to hours paid did not fluctuate dramatically over the 1988–98 period.

[58] Statistics Canada.

[59] Growth of the adjusted Canadian average hours series is virtually unchanged for the 1988–98 period. The adjusted Canadian series is 0.4 percent higher for 1988–92, and 0.2 percent lower for 1992–98 than the original series. Growth of the adjusted U.S. average hours series is 0.1 percent lower for 1988–98, 0.3 percent lower for 1988–92, and 0.1 percent higher for 1992–98 than the published series.

[60] Because Statistics Canada does not use data from the Annual Survey of Manufacturers without such benchmarking, we presume that there are limitations associated with our establishment-based comparisons.

[61] The growth of the adjusted Canadian employment series is revised upward 0.2 percent for 1988–98 and 0.4 percent for 1988–92, and is unchanged for 1992–98. The growth rate of the adjusted U.S. employment series does not change for the 1988–98 period, and is revised upward 0.1 percent for 1988–92 and downward 0.2 percent for 1992–98.

[62] The growth of the adjusted Canadian series for total hours is revised upward 0.1 percent for 1988–98 and 0.9 percent for 1988–92, and revised downward 0.3 percent for 1992–98. The growth rate of the adjusted U.S. series is revised downward 0.2 percent for the periods 1988–98 and 1988–92, and revised downward by 0.1 percent for the 1992–98 period.

[63] These results indicate a fairly limited impact on the productivity gap due to the two countries' uses of different data sources for the labor hours measures for the entire 1988–98 period. However, we found that these results are sensitive to the time frame selected for analysis. For example, if the Canadian data for aggregate hours were constructed on an establishment basis, the 1992 to 1996 growth in hours would be 1.1 percent rather than the published 1.7 percent. In this case, the choice of the source for hours affects the measured gap in a substantial way.

[64] As discussed earlier, the aggregate manufacturing sectors in the United States and Canada are very similar, with the major exception of the treatment of logging. However, within the manufacturing industries, there are additional classification differences that must be taken into account. Using data supplied by Statistics Canada and BEA, we constructed 19 comparable two-digit industries. These reflect the US-SIC87, with the exception of textile mill products (US-SIC87 22) and apparel and other finished products made from fabrics and similar material (US-SIC87 23) that we were forced to combine. To make these adjustments, the consistency in aggregation theorem (Diewert, "Superlative Index Numbers," July 1978) was employed for both countries.

We were unable to match industries perfectly, but made every effort to adjust components of industries that were significant in size, and for which data could be obtained. An industry concordance was constructed based upon four-digit industry descriptions. Where these descriptions were vague, the NAICS concordance was used as a bridge to map US-SIC87 to C-SIC80. We also reviewed the publication produced jointly by the United States and Canada which presented industry concordances. See *International Concordance between the Industrial Classifications of the United Nations and Canada, the European Union, and the United States* (Bureau of the Census, Statistics Canada, and EUROSTAT, undated).

Of the 19 two-digit industries that are compared in this paper, 8 industries were considered one-to-one matches (tobacco; furniture; printing and publishing; chemicals; leather; stone and clay; primary metals; and transportation equipment). Food and rubber and plastics required aggregation of Canadian industries, while textiles and apparel required aggregation of both U.S. and Canadian industries. For the remaining industries, we obtained data from Statistics Canada at approximately the three-digit level to move components among industries. The following adjustments were made: asphalt roofing (Canada L–51) was moved from the paper industry to the petroleum industry; machine shop (Canada L–69) was moved from fabricated metals to machinery; office equipment (Canada L–86), which includes computers, was moved from electronics to machinery and computers; logging (Canada L–3) was added to lumber; and scientific instruments (Canada W–154 and 155) was separated out of miscellaneous to become the instruments industry.

[65] The weighted growth rates were calculated as

$$\left[\frac{a_i^1}{a_i^0} - 1\right] w_i^{1,0}$$

where $a_i^1/a_i^0 - 1$ represents an industry's productivity growth, and where $w_i^{1,0}$ is the average hours share for periods 1 and 0. Because industry contributions can be constructed in different ways, we also estimated industry productivity shares as output-share weighted productivity growth and as output-share-weighted output growth less labor-share-weighted labor growth—these alternatives resulted in the same industries contributing significantly to the aggregate measures.

# Pension integration and retirement benefits

*Pension integration generally increases benefits modestly for workers with less tenure and decreases benefits substantially for workers with more tenure; offset integrated plans have significantly higher replacement rates than excess-rate integrated plans*

Keith A. Bender

The issue of retiree income is important in a time of proposed Social Security reform. In 1996, for example, the shares of aggregate income for those aged 65 or older were, on average, 40.3 percent from Social Security, 18.5 percent from employer pensions, 20 percent from employment, and 21.1 percent from assets and other forms of income.[1] Integration of pension income with Social Security income likely reduces benefits for many retirees, making research on income from integrated pensions critical.

Previous research creates hypothetical earnings histories to simulate the effect of integration on actual plans. In one such simulation, Avy Graham finds that integration decreases replacement rates for low earners and increases them for middle and high earners, compared with those with nonintegrated pensions.[2] By contrast, Keith Bender reports that recent survey data show only a slight correlation between higher replacement rates and higher income for integrated plans.[3] The current article presents new evidence, using a combination of survey data on workers and on their actual pension plans.

## Background

*Some basics on pension integration.* An employer pension plan is *integrated* when it explicitly takes into account Social Security benefits in determining the pension benefit.[4] Because both defined-benefit and defined-contribution plans can be integrated, integration affects a significant number of workers. Data on the rate of integration in private-sector defined-benefit plans are found in the Employee Benefits Survey conducted by the Bureau of Labor Statistics. In 1995, 51 percent of full-time private-sector workers in medium-sized and large establishments who participated in a defined-benefit pension plan were in an integrated plan. However, because roughly half of the workforce was covered by a defined-benefit plan that year, the rate of defined-benefit pension integration among all full-time private-sector workers in medium-sized and large establishments was 26.5 percent. No data have been published on integrated defined-contribution plans, but Bender, using data from the Health and Retirement Study (HRS), shows that approximately 8 percent of workers participating in such plans have an integrated pension.[5] Overall, integration rates in the study are approximately 32 percent for the subsample covered by a pension and 14 percent for the working subsample. Finally, pension integration is rare among government employees. The Federal retirement system is not integrated with Social Security, and, as Ann C. Foster reports, less than 10 percent of all State and local government employees have plans that are integrated with Social Security.[6]

Integration in defined-benefit plans can take place in two ways. Before the Tax Reform Act of 1986, the *offset method* reduced the employer pension by a portion (usually 50 percent) of the retiree's Social Security retirement benefit. For example, suppose that, in the absence of the offset, a new retiree would receive an annual pension benefit of $10,000 and an annual Social Se-

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curity benefit of $8,000. If the pension was integrated by the offset method, then the annual benefit would be reduced by half of the Social Security benefit, to $6,000. Therefore, the pension income of the retiree is $4,000 lower under an integrated plan than it would be in the absence of the plan.

However, the new provisions under the 1986 act modified the offset to be *at most* 50 percent of the employer pension benefit. This was done to ensure that the employer pension could not be reduced to zero, as was possible under the previous integration provisions when the Social Security benefit was more than twice the pension benefit. The new provisions did not entail that offset pensions would automatically be more generous; indeed, in the example of the previous paragraph, under the 1986 regulations half of the pension ($5,000) would be offset, so that the retiree would receive only $5,000 from the pension, as opposed to the earlier figure of $6,000.[7]

Defined-benefit plans can also be integrated through the *excess-rate*, or *step-rate*, *method*, which is characterized by a lower benefit accrual rate for earnings below the integration earnings level (often the Social Security taxable maximum) than for earnings above the integration level. An example of this type of plan is one with an accrual rate of 1 percent of the participant's final salary per year of service for earnings under the taxable maximum ($76,200 in 2000) and 1.5 percent for earnings above the taxable maximum. In this plan, a worker with 30 years of service who earned $100,000 in his or her final year of work and who retired with an excess-rate pension would receive an employer pension benefit of $(0.01 \times 30 \times \$76{,}200) + 0.015 \times 30 \times (\$100{,}000 - \$76{,}200) = \$33{,}570$.

Defined-contribution plans can also be integrated, usually in a method similar to the excess-rate method, if there are different employer contribution rates that depend on the worker's earnings level.

*Pension integration and replacement rates.*[8] The effect of integration on replacement rates depends on a number of factors. Because of the progressive nature of the Social Security benefit formula, highly paid workers with offset plans will have higher replacement rates compared with the low paid with offset pensions, assuming equal replacement rates before the offset. When accrual rates are the same across integrated and nonintegrated pensions, workers with offset plans will have lower replacement rates than workers who receive pension benefits from nonintegrated plans. For example, consider two workers, each of whom earned $40,000 before retirement and who differ only in that one has a nonintegrated pension, while the other's pension is integrated by the offset method. Using the offset example delineated above, one calculates easily that the nonintegrated pension replaces 25 percent of final-year earnings ($10,000 in pension benefits, divided by $40,000 in final-year earnings), while the integrated pension replaces only 15 percent ($6,000 in pension benefits, divided by $40,000 in final-year earnings).

This analysis is valid, however, only if the accrual rates are equal. Using the 1991 Employee Benefits Survey (EBS), Graham finds that, among defined-benefit plans providing a flat percentage of the earnings benefit, the average benefit rate for offset plans is 1.66 percent of the final earnings per year of service, a figure that contrasts with an average benefit rate of 1.42 percent for defined-benefit plans without an offset formula.[9] Graham provides a hypothetical example in which even this higher accrual rate does not fully compensate for the offset for a given income level. At higher levels of income, there is a lower relative offset, given the progressive nature of Social Security benefits. Therefore, when the relative offset decreases with the higher income, it may be more than compensated for by the higher accrual rate.[10]

The influence of integration using excess-rate methods also is ambiguous.[11] With integrated excess-rate plans, more highly paid workers (for example, those with earnings above the taxable maximum) receive benefits that replace a higher proportion of their preretirement earnings. However, when replacement rates are compared across nonintegrated and integrated plans, the relationship is not as clear, because the size of the replacement rates depends on whether the accrual rates for integrated or for nonintegrated plans are higher, other things being equal. For example, if the average accrual rate for earnings above the integration level in integrated plans is equal to or below the accrual rate for the average nonintegrated plan, then the replacement rates will tend to be lower for workers with integrated plans. In the previous example of an excess-rate plan, if the nonintegrated accrual rate were 1.5 percent, a worker earning $100,000 would replace 45 percent of that income for 30 years of service. A worker participating in the earlier example of an integrated plan would replace 34 percent ($33,570 in pension benefits, divided by $100,000 in final earnings) of his or her earned income.

If pensions are used as an incentive to retain highly skilled (and, likely, highly paid) workers, the accrual rate for earnings below the integration level may be set at the average accrual rate of average nonintegrated pensions. High earners would then have a greater incentive to stay with the firm under an excess-rate plan. Under such circumstances, a nonintegrated pension with an accrual rate of 1 percent, based on final earnings of $100,000, would generate a replacement rate of 30 percent, compared with 34 percent for the integrated pension plan.

Of course, these are extreme examples, and the actual accrual rates in excess-rate plans are more likely to be somewhere between these extremes. Therefore, replacement rates for low-paid workers may be lower for those with an integrated excess-rate pension plan compared with those with a nonintegrated plan, while the high-paid workers in an excess-rate plan may have higher or lower replacement rates than those with nonintegrated pensions.

Finally, the effects of tenure on integrated-plan benefits depend upon the method of integration. In excess-rate plans, whose benefit levels are based on tenure, higher levels of tenure should cause the differences between integrated and nonintegrated accrual rates to become more pronounced. In offset plans, the effect of Social Security benefits complicates the relationship between pension benefits and tenure.

*Previous research.* Previous research on the effect of pension integration on replacement rates has focused primarily on calculating replacement rates of hypothetical workers participating in typical integrated and nonintegrated plans, as was done above. Several studies[12] have made these calculations, but Graham analyzes the issue most extensively, using the average formulas from actual defined-benefit plans from the 1991 EBS to calculate replacement rates by number of years in the plan and earnings level. Her main result is that, holding years of participation constant, replacement rates for nonintegrated plans tend to decrease with earnings, while replacement rates for integrated plans generally increase with earnings. Furthermore, integrated pensions are estimated to have higher replacement rates than those of nonintegrated pension plans at high earnings levels and lower rates at low earnings levels.[13]

While Graham's simulation is based on actual pension plan data, it does not take into account the heterogeneity of the workers who participate in these plans. Previous research shows that personal characteristics differ significantly between workers with and without integrated plans; the implication is that research which ignores this heterogeneity may lack an important factor in comparing replacement rates.[14] In addition, Graham examines integrated plans as a group, compared with nonintegrated plans. As mentioned earlier, there are likely to be differences in the replacement ratios of offset and excess-rate plans. The analysis that follows disaggregates the two types of plans and accounts for the heterogeneity of workers to see whether replacement rates depend on the type of integration.

## Data Issues

The data set used in this article is the 1992 HRS. The sample is restricted to those aged 51 to 61 years in 1992, who are covered by a pension from a current job, or for those not currently working, the most recent job, and who have data entries in the Pension Provider Survey (PPS), the detailed pension survey that is part of the HRS. The PPS contains information on workers' sociodemographic characteristics, occupational and industrial affiliation, union membership, and pension characteristics.

Estimated values of replacement rates, based on the projected earnings at age 65, and annual pension benefits were added to the data. Pension benefits are simulated using the HRS Pension Calculator, based on the characteristics of the actual pension plans that cover HRS respondents.[15] The calculations utilize survey-supplied demographic and job-related information (such as age, gender, hiring date, and earnings level), as well as assumptions regarding parameters such as earnings growth, inflation, and other factors. The values of the parameters are based on the intermediate assumptions of actuarial projections from the 1992 *Social Security Trustee's Report.* A further assumption is that, regardless of when workers plan to retire or actually have retired, all workers retire at age 65. Besides the parallel with Graham's analysis, which also assumes a retirement age of 65, that age is when full, unreduced benefits are available from Social Security and most private pensions (although many pensions give full benefits before age 65). With the assumption of a common retirement age, no complicating effects arise in comparing retirement benefits across workers of varying retirement ages. Pension benefits and Social Security benefits (needed for offset plan benefit calculations) are computed using current earnings and assumptions on earnings growth to estimate both retrospective and future earnings, the latter because the pension benefit calculations use earnings over a worker's tenure with the firm, whereas the Social Security benefit calculations use whole-career earnings. With these data, the Pension Calculator simulates earnings histories of workers to the age of 65, meaning that tenure and earnings are projected forward until that age. Then the pension plan characteristics are used to calculate annual benefits and replacement rates as if those workers retired at age 65.[16]

An important issue is how to treat the case of workers who are covered by more than one pension on their current or (if they are not currently working) most recent job.[17] Each such individual was replicated for each plan in which he or she participated, although the plan-specific pension benefits remained with the plan (meaning that estimated pension benefits differ across plans). The result is that the unit of observation for the final data sample is based on a worker-pension, rather than just a worker, observation.[18] Sample weights were adjusted to maintain the representative nature of the data.[19] All monetary values are adjusted to 1992 dollars.

Because the rate of integration is very low for defined-contribution plans, there are not enough observations to compare integrated with nonintegrated defined-contribution plans. Hence, the analysis is restricted to defined-benefit plans. (Workers with both defined-benefit and defined-contribution plans have information on the latter dropped.) This restriction allows a more direct comparison with Graham's analysis, which also examines defined-benefit plans only. When all of the restrictions on the data are taken into account, there are 2,197 worker-pension observations, 1,375 of which are covered by a nonintegrated pension and 822 by an integrated pension.[20] Of those with integrated pensions, 502 have excess-rate provisions, while 387 have offset provisions.[21]

## Results

Graham's analysis is based on the 1991 EBS, which collected information on pension plans from medium-sized and large private-sector establishments. Until recently, the EBS was the only data source on integrated plans, although it has virtually no information on the workers covered by these plans. The advantage of the person-level HRS is that one can analyze how pension integration affects the retirement benefits of workers with a variety of demographic and workplace-related characteristics and differing job histories.

*Integration, retirement benefits, and worker characteristics.* Table 1 examines the data on retirement benefits generated by the HRS Pension Calculator, by integration status and selected worker characteristics.[22] Overall, the average replacement rate is 38.7 percent for nonintegrated plans and 26.9 percent for integrated plans. Except for those with associate's degrees and those in manufacturing, every characteristic of workers shows that, on average, the nonintegrated replacement rate is higher than the integrated replacement rate. While a few of the differences are small (for example, for mechanics and operators among occupations), clearly, replacement rates are lower for integrated plans, on average.

The table also shows estimated replacement rates by method of integration. Overall, the replacement rates for offset plans (30.3 percent) are higher than those for excess-rate plans (24.0 percent). This is also the case for the majority of worker characteristics. The only instances in which excess-rate replacement rates are higher are in large firms (with 100 or more workers) and for sales occupations. Note that public-sector[23] workers with offset plans and workers in natural resources and manufacturing industries, regardless of the type of integration their plans possess, have a higher average replacement rate than workers

**Table 1. Average estimated replacement rates and annual benefits at age 65, by integration status and demographic characteristic**

| Characteristic | Replacement rate (in percent) | | | | Annual Benefits | | | |
|---|---|---|---|---|---|---|---|---|
| | Nonintegrated | Integrated | Excess | Offset | Nonintegrated | Integrated | Excess | Offset |
| Overall | 38.7 (1,375) | 26.9 (822) | 24.0 (502) | 30.3 (387) | $20,578 | $15,088 | $13,330 | $17,624 |
| Women | 40.0 (616) | 25.9 (365) | 22.5 (224) | 29.8 (161) | 17,906 | 9,970 | 8,410 | 11,648 |
| Men | 37.7 (759) | 27.7 (457) | 25.2 (278) | 30.7 (226) | 22,592 | 19,044 | 17,108 | 21,695 |
| White | 38.5 (984) | 26.4 (635) | 24.2 (402) | 29.4 (288) | 21,071 | 15,140 | 13,672 | 17,518 |
| Black | 41.5 (291) | 29.8 (134) | 23.8 (75) | 36.6 (64) | 18,178 | 13,189 | 9,743 | 17,171 |
| Hispanic | 33.1 (78) | 26.2 (41) | 20.6 (18) | 28.0 (29) | 14,300 | 12,290 | 10,948 | 13,549 |
| Other | 44.0 (22) | 33.8 (12) | 19.9 (7) | 43.0 (6) | 29,315 | 24,255 | 14,299 | 30,018 |
| No high school | 34.5 (415) | 25.7 (289) | 22.8 (167) | 29.0 (144) | 16,234 | 11,766 | 10,676 | 13,578 |
| High school | 36.4 (481) | 24.6 (331) | 23.7 (211) | 26.1 (148) | 14,983 | 11,555 | 10,427 | 13,475 |
| Associate's degree | 38.9 (49) | 39.6 (31) | 26.3 (13) | 45.5 (20) | 19,784 | 22,259 | 15,569 | 25,894 |
| Bachelor's degree | 44.5 (194) | 28.6 (113) | 25.9 (76) | 32.3 (49) | 26,990 | 22,342 | 21,365 | 24,748 |
| Graduate degree | 44.4 (236) | 33.1 (58) | 26.2 (35) | 40.3 (26) | 32,196 | 28,392 | 23,147 | 33,458 |
| Union covered | 37.6 (775) | 30.5 (281) | 25.5 (147) | 35.0 (150) | 19,595 | 15,094 | 12,027 | 18,294 |
| Not covered | 40.1 (600) | 24.8 (541) | 23.3 (355) | 27.1 (237) | 21,838 | 15,085 | 13,915 | 17,155 |
| Firm size < 100 | 41.6 (45) | 22.8 (13) | 22.7 (12) | — (1) | 19,883 | 10,685 | 10,893 | — |
| Firm size 100–499 | 38.7 (159) | 30.4 (47) | 38.6 (33) | 34.1 (18) | 19,610 | 15,038 | 14,054 | 17,018 |
| Firm size > 499 | 39.7 (989) | 27.4 (676) | 35.6 (392) | 30.2 (346) | 22,177 | 15,729 | 14,145 | 17,676 |
| Industry: | | | | | | | | |
| Natural resources | 18.7 (14) | 22.9 (16) | 23.4 (10) | 24.5 (9) | 9,992 | 16,797 | 18,099 | 20,228 |
| Manufacturing | 22.4 (196) | 25.7 (278) | 24.4 (164) | 26.8 (152) | 10,107 | 15,224 | 13,420 | 17,042 |
| Transport | 31.9 (87) | 27.3 (83) | 25.7 (49) | 29.6 (40) | 16,709 | 18,181 | 14,987 | 22,167 |
| Sales | 22.2 (27) | 16.6 (72) | 17.2 (34) | 17.3 (42) | 8,664 | 6,744 | 7,441 | 7,613 |
| Service | 31.0 (22) | 21.3 (104) | 21.3 (77) | 21.2 (38) | 12,364 | 14,271 | 15,722 | 11,461 |
| Professional | 34.3 (197) | 23.6 (88) | 22.2 (66) | 28.5 (23) | 17,616 | 11,024 | 10,937 | 12,656 |
| Public sector | 44.7 (826) | 36.7 (174) | 28.0 (99) | 45.4 (78) | 24,455 | 18,830 | 13,855 | 23,930 |
| Occupation: | | | | | | | | |
| Manager | 43.3 (215) | 29.8 (141) | 26.2 (91) | 34.9 (66) | 30,136 | 24,090 | 22,255 | 26,817 |
| Professional | 45.4 (373) | 29.1 (134) | 25.2 (89) | 34.7 (58) | 28,735 | 19,173 | 15,455 | 24,897 |
| Sales | 26.8 (25) | 19.7 (39) | 22.0 (22) | 17.3 (19) | 10,229 | 8,839 | 10,998 | 8,274 |
| Clerical | 42.6 (253) | 27.1 (188) | 23.7 (117) | 30.5 (84) | 16,767 | 10,708 | 9,038 | 12,327 |
| Service | 33.2 (175) | 26.3 (68) | 23.8 (38) | 29.3 (31) | 11,884 | 9,521 | 8,174 | 11,344 |
| Mechanics and repair | 27.9 (79) | 27.2 (50) | 24.5 (28) | 30.1 (23) | 12,592 | 18,243 | 12,231 | 24,363 |
| Construction | 29.2 (39) | 27.0 (17) | 27.1 (14) | 28.0 (5) | 14,422 | 15,636 | 15,948 | 16,032 |
| Precision and production | 36.7 (37) | 25.6 (50) | 21.0 (27) | 29.2 (30) | 12,245 | 11,690 | 10,066 | 13,201 |
| Operators, including machine, transport, and handlers | 25.8 (176) | 22.8 (134) | 20.7 (76) | 25.2 (70) | 9,743 | 9,680 | 8,503 | 11,423 |

NOTE: Dash indicates not enough observations to calculate the average replacement rate or annual benefit. Results are weighted by revised sample weights. Annual benefits are adjusted for 1992 prices. Numbers in parentheses are the unweighted numbers of worker-pension observations. Missing observations: 268 for firm size, 13 for industry, and 4 for occupation.

**Table 2.** Selected results from replacement rate regressions, by type of pension plan

| Variable | Not integrated | Integrated | Excess rate | Offset |
|---|---|---|---|---|
| Number of observations | 1,375 | 822 | 502 | 387 |
| Pay at age 65, in dollars | [1].00029 (7.27) | [1].00033 (7.39) | [1].00023 (4.81) | [1].00061 (6.75) |
| Pay squared | [1]$-8.2 \times 10^{-10}$ (–5.85) | [1]$-1.0 \times 10^{-9}$ (–5.84) | [1]$-7.1 \times 10^{-10}$ (–4.29) | [1]$-3.3 \times 10^{-9}$ (–5.35) |
| Tenure in years at age 65 | [2]2.0529 (7.79) | [1]1.0185 (3.77) | [1].9867 (3.64) | [2]1.0666 (2.31) |
| Tenure squared | [1]–.0148 (–3.41) | –.0057 (–1.30) | –.0055 (–1.24) | –.0063 (–.84) |
| Adjusted $R^2$ | .468 | .379 | .361 | .441 |

[1] $p < .01$.
[2] $p < .05$.

NOTE: The dependent variable is the estimated replacement rate in percentage points, assuming retirement at age 65. Student's *t*-statistics are in parentheses. The regressions also included a constant term and variables controlling for gender, race or ethnicity, education level, union coverage, firm size, one-digit Standard Industrial Classification, and one-digit Standard Occupational Classification. Full results are available from the author. Monetary values are based on 1992 prices.

with nonintegrated plans have in their respective industries.

The effect of integration on annual benefits is shown in the table as well. Again, nonintegrated plans pay a higher average annual benefit ($20,578, compared with $15,088 for integrated plans). However, for several categories (those with an associate's degree; workers in the natural resources, manufacturing, transport, and service industries; and those in mechanics and construction occupations), the average benefits are higher for integrated plans. Furthermore, upon breaking down integrated plans into excess-rate and offset plans, it becomes clear that offset plans are more generous, on average, by more than $4,000 ($17,624, as against $13,330) and that in several instances (workers in the "other" race category; those with associate's and graduate degrees; workers in the natural resources, manufacturing, and transport industries; and those in mechanics, construction, precision production, and operator occupations), the average offset plan benefit is larger than the nonintegrated plan benefit. In two instances (workers in the service industry and those in sales occupations), excess-rate plans are more generous than offset plans and nonintegrated plans, on average. Clearly, the empirical relationship between integration and benefits, while generally inverse, is more complex among actual workers and different types of plans than previous research indicates.

*Regression results.* While the results displayed in table 1 show differences in retirement benefits from different types of plans, it could be that these averages are influenced by the different characteristics of those with integrated and nonintegrated pensions. To control for these characteristics, a series of multivariate regressions is estimated. Separate weighted regressions are run for the samples of workers with nonintegrated and integrated pensions wherein the dependent variable is the replacement rate or annual benefits. The key independent variables are earnings and tenure at age 65. As reported in Graham, the relationship between replacement rates, on the one hand, and earnings and tenure, on the other, is nonlinear.[24] To account for these nonlinearities, squared terms for the earnings and tenure variables are included in the regressions. Other variables that are controlled for, but not reported in the tables, are gender, race or ethnicity, education, union status, firm size, and industrial and occupational affiliation.[25] These variables are listed in table 1.

Table 2 contains selected results from the replacement rate regressions. The relationships between the replacement rates of nonintegrated pensions, on the one hand, and pay and tenure, on the other, are significant, positive, and nonlinear (as indicated by the significance of the negative squared terms). Table 3 shows the effects of changes in pay and of tenure at age 65 on replacement rates. Assuming changes from the average levels of pay and tenure (given in the last two rows of the table), the effect of a $1,000 increase in pay is to increase the replacement rate of nonintegrated plans by 0.24 percentage point.[26]

The positive relationships reported here may seem somewhat counterintuitive, because defined-benefit plans are generally characterized by accrual rates which generate replace-

**Table 3.** Effects of changes in pay and tenure at age 65 on pension benefits, by type of pension plan

| Regression | Not integrated | Integrated | Excess rate | Offset |
|---|---|---|---|---|
| Replacement rate regression: | | | | |
| Pay (thousands) | 0.24 | 0.26 | 0.18 | 0.37 |
| Tenure | 1.14 | .67 | .65 | .67 |
| Annual benefit regression: | | | | |
| Pay (thousands) | $750 | $532 | $458 | $654 |
| Tenure | $664 | $358 | $341 | $355 |
| Average pay at age 65 | $33,478.52 | $34,574.80 | $34,343.46 | $35,896.03 |
| Average tenure at age 65 | 30.99 | 30.90 | 30.41 | 31.73 |

NOTE: Effects are based on the coefficients given in tables 2 and 4. Replacement rate changes are in percentage points. Monetary values are in 1992 prices.

ment rates that are relatively invariant to earnings levels. A positive relationship may be due to relatively more generous pensions being correlated with relatively high-paying industries or occupations. A negative relationship could be generated by benefits that are based not on accrual rates (percent of earnings multiplied by tenure), but on a flat dollar figure multiplied by tenure.[27]

The effect of tenure on replacement rates is much larger than the effect of earnings. Table 3 indicates that an increase in tenure of 1 year results in an increase in the replacement rate of 1.14 percentage points. Graham also finds a strong positive relationship between tenure and replacement rates.

In addition to displaying the regression results for nonintegrated plans, table 2 shows the results for integrated plans. For all integrated plans, pay and its square are significant, as they are for the nonintegrated plans. However, while tenure at age 65 is significant, its square is not, indicating that the relationship between tenure and replacement rates is likely a linear one for integrated plans. Examining the effects of changes in pay and tenure for integrated plans in table 3 indicates that a $1,000 increase in pay increases the integrated replacement rate by 0.26 percentage point, somewhat more than for nonintegrated replacement rates. This is caused by the relatively large effect on offset plans (an increase of 0.37 percentage point). The tenure effect, conversely, is smaller than for nonintegrated plans, with a year's increase in tenure resulting in an increase of 0.67 percentage point in the replacement rate for all integrated pensions.

Table 4 presents selected results from the estimated annual benefits regressions. Again, pay is significant in all types of pensions. However, the tenure effects are weaker, with none of the squared terms significant, and in the offset plan sample, the tenure term is not significant. Table 3 shows the effects of changes in pay and tenure on annual benefits. In contrast to its effect on replacement rates, the effect of a $1,000 increase in pay on benefits is larger for nonintegrated plans ($750) than for integrated plans ($532), although offset plans are close ($654). This pattern continues with the effect of changes in tenure on annual benefits: an increase in tenure by 1 year increases annual benefits for nonintegrated plans by $664, while raising benefits for integrated plans by $358 ($341 for excess-rate plans and $355 for offset plans).[28]

*Simulations of replacement rate profiles.* To see how the earnings and tenure coefficients affect replacement rates, simulations using the results from the regressions were calculated for a variety of tenure and earnings categories in a manner similar to Graham's calculations.[29] To calculate the replacement rates, a base replacement rate was computed for each type of plan, using the weighted averages of all the variables (except pay and tenure) and the estimated coefficients from the regressions. Then the projected pay and tenure categories were included (along with their coefficients) to generate replacement rates that vary by pay, tenure, and type of pension. Table 5 shows the results of these simulations for workers covered by nonintegrated plans and those covered by integrated plans. Integrated pensions have higher replacement rates only at the lowest tenure level (10 years). In contrast, Graham found that, for all tenure levels, integrated pensions had lower replacement rates for the two lower earnings levels and lower rates for the four higher earnings levels. (See table 1 in Graham.) Another way to see the relationships between the different plans' replacement rates is graphically. Chart 1 shows that, generally, nonintegrated replacement rates increase relative to integrated rates as tenure increases. (To keep the graph from being too cluttered, just the 10- and 30-year tenure estimates are plotted.) Once tenure is held constant, the rate of increase with earnings is somewhat faster for integrated plans than for nonintegrated plans. This leads to a slightly increasing difference in replacement rates as earnings rise for low-tenure workers (for whom integrated rates are higher than nonintegrated rates) and a slightly decreasing difference for high-tenure workers (for whom integrated rates are lower).

Table 5 also disaggregates the integrated plans into excess-rate plans and offset plans. Given the differences in the coefficients in the previous tables, one would expect to see some significant differences in the simulated replacement rates. This is exactly what happens. First, for all of the tenure

**Table 4.** Selected results from annual benefit regressions, by type of pension plan

| Variable | Not integrated | Integrated | Excess rate | Offset |
|---|---|---|---|---|
| Pay at age 65, in dollars | [1]0.837 (32.02) | [1]0.564 (19.54) | [1]0.469 (15.15) | [1]0.862 (14.22) |
| Pay squared | [1]$-1.3 \times 10^{-6}$ (−14.42) | [1]$-4.6 \times 10^{-7}$ (−4.02) | $-1.6 \times 10^{-7}$ (−1.47) | [1]$-2.9 \times 10^{-6}$ (−6.83) |
| Tenure in years at age 65 | [1]583.29 (3.33) | [1]540.74 (3.05) | [1]601.47 (3.45) | 426.68 (1.38) |
| Tenure squared | 1.305 (.45) | −2.960 (−1.03) | −4.281 (−1.50) | −1.132 (−.23) |
| Adjusted $R^2$ | .692 | .696 | .779 | .666 |
| Number of observations | 1,375 | 822 | 502 | 387 |

[1] $p < .01$.

NOTE: The dependent variable is the estimated annual benefit, assuming retirement at age 65. Student's *t*-statistics are in parentheses. The regressions also included a constant term and variables controlling for gender, race or ethnicity, education level, union coverage, firm size, one-digit Standard Industrial Classification, and one-digit Standard Occupational Classification. Full results are available from the author. Monetary values are based on 1992 prices.

**Table 5.** Simulated replacement rates, by years of tenure and final-year earnings at age 65

| Tenure and integration status | $15,000 | $25,000 | $35,000 | $45,000 | $55,000 | $65,000 |
|---|---|---|---|---|---|---|
| 10 years: | | | | | | |
| Nonintegrated | 5.6 | 8.1 | 10.5 | 12.7 | 14.8 | 16.6 |
| Integrated | 6.4 | 9.2 | 11.9 | 14.3 | 16.6 | 18.6 |
| Excess plan | 5.8 | 7.8 | 9.7 | 11.4 | 13.0 | 14.5 |
| Offset plan | 6.1 | 10.9 | 15.0 | 18.4 | 21.2 | 23.3 |
| 20 years: | | | | | | |
| Nonintegrated | 21.7 | 24.2 | 26.6 | 28.8 | 30.9 | 32.7 |
| Integrated | 14.9 | 17.7 | 20.4 | 22.8 | 25.0 | 27.1 |
| Excess plan | 14.0 | 16.0 | 17.9 | 19.6 | 21.3 | 22.7 |
| Offset plan | 14.9 | 19.7 | 23.8 | 27.2 | 30.0 | 32.1 |
| 30 years: | | | | | | |
| Nonintegrated | 34.8 | 37.4 | 39.7 | 42.0 | 44.0 | 45.9 |
| Integrated | 22.2 | 25.0 | 27.7 | 30.1 | 32.4 | 34.4 |
| Excess plan | 21.1 | 23.1 | 25.0 | 26.8 | 28.4 | 29.8 |
| Offset plan | 22.5 | 27.2 | 31.3 | 34.7 | 37.5 | 39.6 |
| 40 years: | | | | | | |
| Nonintegrated | 45.0 | 47.6 | 49.9 | 52.2 | 54.2 | 56.1 |
| Integrated | 28.4 | 31.2 | 33.9 | 36.3 | 38.5 | 40.6 |
| Excess plan | 27.1 | 29.1 | 31.0 | 32.8 | 34.4 | 35.8 |
| Offset plan | 28.7 | 33.5 | 37.6 | 41.0 | 43.8 | 45.9 |

NOTE: Monetary values are in 1992 prices.

and earnings combinations, offset plans replace higher proportions of earnings than do excess-rate plans. It appears, therefore, that the reduction in benefits effected by offset plans is more than compensated for by their higher accrual rates, compared with the reduction in benefits effected by excess-rate plans. An examination of the integrated and nonintegrated plans in chart 1 reveals that the results are driven primarily by offset plans: offset plan replacement rates are higher and increase more rapidly with earnings than do nonintegrated replacement rates for 10 years of tenure. For higher levels of tenure, the gap between the offset and nonintegrated rates gets smaller as earnings increase. Once more, a graph is helpful in revealing these patterns. Chart 2 shows replacement rates for 10 and 30 years of tenure. (Again, only those estimates are plotted, in order to keep the graph from being too cluttered.) Clearly, the rate of increase in replacement rates as earnings increase for offset plans relative to the rate of increase for other types of plan is sizable.[30]

A final note concerns the inclusion of public-sector workers in the analysis. Unlike Graham, whose data cover private-sector workers only, the HRS also contains information on public-sector workers, making it more representative of the workforce. However, their inclusion poses certain difficulties, given that public-sector pensions are likely to provide higher replacement rates and are much less likely to be integrated, partially because some public-sector workers are not covered by Social Security. Furthermore, the percentage of public-sector workers is quite high in this sample from the HRS, because of the much higher match rate of the detailed pension information to the household survey data for public-sector workers (90 percent) than for private-sector workers (55 percent). Accordingly, while the preceding results include these public-sector workers,[31] results based on the private-sector sample only[32] show that pay becomes much less important in explaining replacement rates and annual benefits of nonintegrated plans, whereas tenure is less important in explaining offset pension retirement benefits. Simulated replacement rates for offset plans are still greater than nonintegrated rates at low levels of tenure, and while replacement rates from offset plans remain greater than those from excess-rate plans, the rate of increase of replacement rates with earnings becomes more similar to that of other types of plans.

THIS ARTICLE HAS SHOWN THAT IT IS IMPORTANT to examine not only actual pension plans, but also the distribution of those plans across workers. Given the heterogeneous characteristics of workers, their replacement rates might differ significantly from rates estimated for hypothetical homogeneous workers (as in Graham). The article has explored this issue by examining the effect of pension integration on pension replacement rates, using data from the Health and Retirement Study. The investigation indicates a somewhat different pattern of results, compared with those of other researchers looking at the relationship.

First, given the very different way that excess-rate and offset integrated plans are structured, they need to be treated differently in the examination of replacement rates of integrated pension plans. Indeed, offset plans are generally estimated to have higher replacement rates than excess-rate plans have, and the difference grows as earnings increase. While it

**Chart 1.** **Selected replacement rates for integrated and nonintegrated defined-benefit plans, by years of tenure and earnings at age 65**

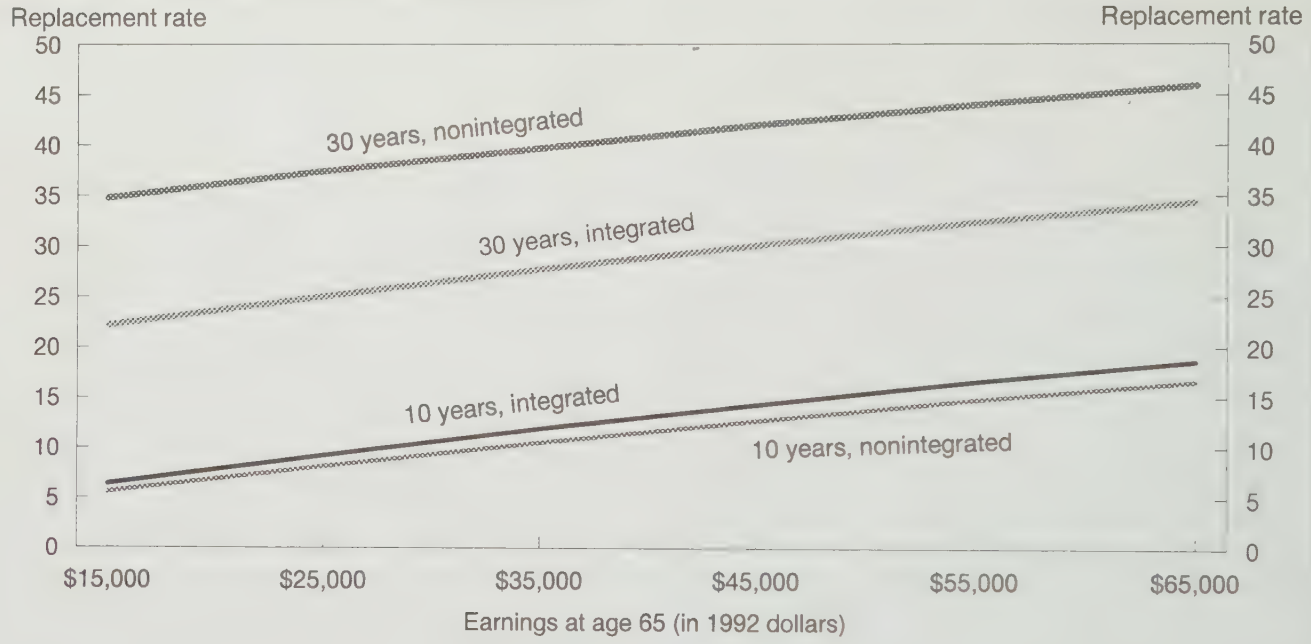
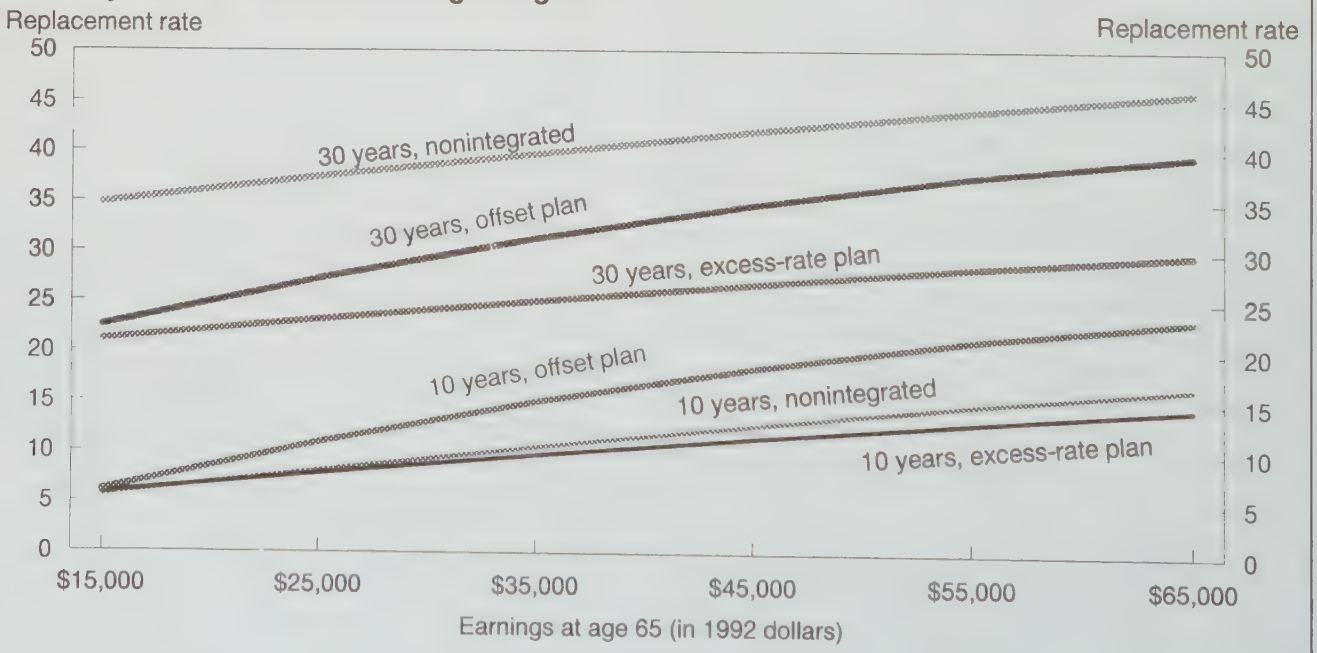



**Chart 2.** **Selected replacement rates of excess, offset, and noninegrated defined-benefit plans, by years of tenure and earnings at age 65**



may seem that offset plans result in lower replacement rates due to the reduction in pension benefits, the higher average accrual rates of these plans more than compensate for the offset, compared with excess-rate plans.

Second, for workers with less tenure, offset plans yield higher replacement rates than do nonintegrated plans. At higher tenure levels, the opposite is true, with nonintegrated pensions paying higher replacement rates; however, replacement rates of offset plans grow more rapidly with earnings, so the difference in rates is smaller at high earnings levels than at low earnings levels when tenure is held constant.

Third, excess-rate plans have lower replacement rates than nonintegrated plans. Indeed, the growth of replacement rates as earnings increase for excess-rate plans is slower than for nonintegrated plans, showing that excess-rate plans are apparently not used to retain highly paid workers. The differences between excess-rate and nonintegrated replacement rates can become quite large: up to 20 percentage points for high earners ($65,000) with high tenure (40 years).

Finally, recent BLS data show that there has been an increase in excess-rate plans as a proportion of integrated plans. This trend suggests that increasing numbers of people with integrated plans will be receiving substantially lower replacement rates than highly paid workers with nonintegrated plans. □

## Notes

ACKNOWLEDGMENT: Thanks go to Ben Bridges, John Heywood, Mike Leonesio, Kel Utendorf, and John Woods for helpful comments. The computational assistance of Rob Gesumaria is also greatly appreciated. The empirical work on this article occurred when the author was an economist for the Division of Economic Research at the Social Security Administration. The views expressed in the article are those of the author and not necessarily those of the Social Security Administration.

[1] *Income of the Population 55 or Older, 1996* (Social Security Administration, 1998), table VII.2.

[2] Avy D. Graham, "Coordinating private pension benefits with Social Security," *Monthly Labor Review,* March 1994, pp. 35–38.

[3] Keith A. Bender, "Characteristics of Individuals with Integrated Pensions," *Social Security Bulletin,* vol. 62, no. 3, 1999, pp. 4–14.

[4] For a more extensive discussion of pension integration, see James H. Schulz and Thomas D. Leavitt, *Pension Integration: Concepts, Issues, and Proposals* (Washington, DC, Employee Benefit Research Institute, 1983); and Geoffrey Kollmann, Ray Schmitt, and Michelle Harlan, "Effect of Pension Integration on Retirement Benefits," *Congressional Research Service Report for Congress, 94–974* (Washington, DC, Congressional Research Service, 1994).

[5] See Bender, "Individuals with Integrated Pensions."

[6] Ann C. Foster, "Public and Private Sector Defined Benefit Pensions: A Comparison," *Compensation and Working Conditions,* Summer 1997, pp. 37–43.

[7] Note that the 1986 tax reform act did not take effect until the early 1990s, so the integration provisions in the pensions analyzed in this article are based on regulations extant before the act took effect.

[8] The term *replacement rate* has different definitions in the literature, depending on what the numerator and denominator of the ratio are construed to be. For discussions of some of the different methods used to calculate replacement rates, see Alan Fox, "Earnings Replacement Rates and Total Income: Findings from the Retirement History Study," *Social Security Bulletin,* October 1982, pp. 3–23; Michael J. Boskin and John B. Shoven, "Concepts and Measures of Earnings Replacement during Retirement," in Zvi Bodie, John B. Shoven, and David A. Wise, eds., *Issues in Pension Economics* (Chicago, University of Chicago Press, 1987), pp. 113–41; and Susan Grad, "Earnings Replacement Rates of New Retired Workers," *Social Security Bulletin,* October 1990, pp. 2–19. In addition, Jacob Antler and Yehuda Kahane, "The Gross and Net Replacement Ratios in Designing Pension Schemes and in Financial Planning: The Israeli Experience," *Journal of Risk and Insurance,* June 1987, pp. 283–97, offer an interesting twist on replacement rates by comparing replacement rates that are gross and net of income taxes. Following Graham, "Coordinating private pension benefits," the current article calculates replacement rates on the basis of estimated final-year earnings (gross of income taxes) and pension benefits calculated for retirement at age 65.

[9] Graham, "Coordinating private pension benefits."

[10] This differing compensation may be what is driving the results in Graham's table 1, which combines both offset and excess-rate plans. In the table, the replacement rates of integrated plans increase with income and eventually are larger than the replacement rates of nonintegrated pensions.

[11] Note that these arguments about excess-rate defined-benefit plans also hold for integrated defined-contribution plans.

[12] See, for example, Donald Bell and Diane Hill, "How social security payments affect private pensions," *Monthly Labor Review,* May 1984, pp. 15–20; Schulz and Leavitt, *Pension Integration;* Kollman, Schmitt, and Harman, "Effect of Pension Integration," and Chuck Slusher, "Pension Integration and Social Security Reform," *Social Security Bulletin,* vol. 61, no. 3, 1998, pp. 20–27.

[13] See Graham, "Coordinating private pension benefits."

[14] See Slusher, "Pension Integration," and Bender, "Individuals with Integrated Pensions."

[15] The data utilized in this article are the pension-covered subsample used in Bender, "Individuals with Integrated Pensions"; here, though, a newer version of the Pension Calculator is employed. (See Bender for a more thorough discussion of the data, and see also Richard T. Curtin, Jody Lamkin, and Bob Peticolas, *Employer Sponsored Pension Benefit Plans: Pension Estimation Program Documentation,* HRS/AHEAD Documentation Report DR004, University of Michigan, 1998, for details regarding the HRS/University of Michigan Pension Calculator, version 6B.) Bender finds that only 64 percent of those in the pension-covered subsample of the HRS gave detailed enough information to identify whether their plans were integrated and allow benefits to be estimated. Bender discusses the characteristics of those with missing pension data and the possible selection effects of excluding such individuals.

[16] Results based on the assumption of retirement at age 62 were similar to those based on retirement at age 65 and are available from the author upon request.

[17] The HRS asks pension-related questions only of the primary job if the respondent currently holds more than one job, or only of the most recent primary job if the respondent is not currently working. Each worker may have recorded information on up to three pensions from his or her primary job. Information on pensions from previous jobs is

not used, for continuity with Bender, "Individuals with Integrated Pensions," and for reasons given there for excluding data on previous jobs.

[18] The reason for this disaggregation is a conceptual one. If a worker had both an integrated and a nonintegrated pension, it would be difficult to assign the person to the integrated or nonintegrated pension group. By "splitting" the individual into two, one can assign his or her characteristics to each type of pension. This conceptual separation affects the 32 percent of the sample with multiple pensions. Therefore, in the analysis presented, each worker-pension observation contains information on only one pension.

[19] For example, if a respondent has a weight of 3, but participates in two pension plans, the two worker-pension observations would have weights of 1.5 each.

[20] The percentage of integrated plans in this sample is lower than in Graham's for two main reasons. First, the HRS sample includes workers from firms of any size, as opposed to just medium-sized and large firms surveyed in the EBS. Second, public-sector workers (who generally have lower rates of integration) are included in the sample used in this article.

[21] Some integrated plans have both excess-rate and offset provisions. These observations are included in both samples. There is no record or weight splitting for them, because each such observation is considered a single integrated plan.

[22] As noted by the number of unweighted observations (in parentheses) in the table, some of these averages (in particular, "other race," "firm size < 100," "natural resources," "sales," and "service" among industries, and "sales" and "construction" among occupations) are based on small sample sizes and therefore can be unduly influenced by outlying benefit values.

[23] Public-sector workers are identified, not by their affiliation to the "public administration" industry, but by the HRS job history section, which asks about employment and tenure in Federal, State, and local government. Therefore, in this analysis, the public sector is considered an industry, with the other industry indicators referring strictly to private-sector employment.

[24] See Graham, "Coordinating private pension benefits."

[25] A variant of these regressions included indicator variables from age 51 to 61 to capture any effects of real earnings growth on replacement rates and annual benefits. The coefficients on these variables were not significant and were therefore dropped.

[26] Graham, in contrast, finds a negative relationship between earnings and replacement rates of nonintegrated plans, holding years of service constant. Part of this difference in the two studies' findings may be due to their difference in pension coverage. Graham's pension sample covers private-sector plans only, while the pension plans examined in this article also include public-sector plans.

[27] Other research has found that the relationship between replacement rates and final earnings depends on the types of pensions given to different occupations. White-collar workers, who tend to have pension benefits that are based on their final-year earnings or career averages, were found to have replacement rates that were relatively invariant to final earnings. Blue-collar workers, by contrast, who tend to have their benefits determined by a flat dollar amount multiplied by the number of years of service they have accrued, were shown to have replacement rates that were negatively related to their final earnings. (See William J. Wiatrowski, "New survey data in pension benefits," 00*Monthly Labor Review*, August 1991, especially table A-1)

[28] One of the findings from Bender, "Individuals with Integrated Pensions," is that a worker is more likely to have an integrated pension if he or she has more than one pension. In addition, it is likely that benefits from an employer with one pension plan will be more generous than the benefits from any one plan from an employer that offers more than one plan, other things being equal. To explore this matter, the analysis was repeated, restricting the sample to those with only one plan. The estimated tenure and earnings coefficients were similar to the ones reported in Tables 2 and 4.

[29] See Graham, "Coordinating private pension benefits."

[30] The results from the tables are robust to the choice of retirement age. The basic patterns were generally replicated when the retirement age for workers was assumed to be 62 years rather than 65. The main difference is that, in the age-62 regressions, replacement rates increase slightly less as tenure increases.

[31] The regression coefficients of the public-sector indicator variable were positive, significant, and much larger than the regression coefficients of the private-sector industry indicators.

[32] Available from the author upon request.

## The third wave of revolution?

Roughly 100 years ago, new technologies began to radically change the economic landscape. Two of the most important technologies in driving economic and social change were the automobile and electrification. Some people believe we are in the midst of a similar upheaval with the Internet, and economist Robert Gordon asks, "Does the 'New Economy' Measure up to the Great Inventions of the Past?" *(The Journal of Economic Perspectives,* Fall 2000).

Despite what many others claim, his analysis leads him to believe the answer is "no." Gordon writes that the first industrial revolution occurred from 1760 to 1830, chiefly in Great Britain; and the second from, roughly, 1860 to 1900. It is the second that "led to the golden age of productivity from 1913 to 1972." Much of what he describes as critical to the revolution leading to the "golden age" center around "five clusters of inventions" we take for granted today. The five he names are (1) electricity; (2) the internal combustion engine; (3) the use and manipulation of petroleum and natural gas; (4) the flow of entertainment, communication, and information; and (5) "perhaps the most tangible improvement in the everyday standard of living besides electricity [was] the rapid spread of running water, indoor plumbing, and urban sanitation infrastructure."

Notwithstanding the notion that most people would choose indoor plumbing over plumbing the depths of the Internet, Gordon notes that "there are deeper reasons, rooted in basic principles ... like diminishing returns" why, 50 years from now, historians and economists will likely *not* view "the present surge in computer investment as the harbinger of a Third Industrial Revolution." While this technology, without a doubt, represents an important and amazing shift in the way people process and manipulate large amounts of information, it appears to be of far lesser magnitude than the more life-altering technologies that emerged in the early 1900s.

## Employee involvement

In "The Anatomy of Employee Involvement and Its Effects on Firms and Workers" (NBER Working Paper No. 8050), Richard B. Freeman, Morris M. Kleiner, and Cheri Ostroff study several aspects about the locus and economic impacts of employee involvement (EI). The authors find that when American firms implement programs such as self-directed work teams, total quality management, quality circles, and profit sharing, employees get more involved in their jobs.

Having information from both employees and firms, the authors are able "to ask not only what EI does for firms ... but also what EI does for workers." They find that "EI practices are linked in an hierarchical structure that provides a natural scaling of EI activities and the intensity of the EI effort."

The adoption of EI is beneficial to some firms. They may garner a competitive advantage in the marketplace. Some may use EI as a way out of financial trouble. Other firms believe EI is a more profitable or morally better way to operate their business. However, the authors state that EI has a weak and poorly specified effect on output per worker, and that management has not devolved sufficient authority to employees for EI to work most effectively.

EI clearly benefits workers more so than firms. It boosts employee well-being, granting them a greater say about their jobs. It also evokes more positive assessments of workplace relations, as well as greater trust employees place in their firm.

## Rise in stocks and labor supply

There is no question that the returns to stocks in the second half of the 1990s were high by historical standards. There are questions, however, about the effects that those returns had on the behavior of individuals. In "The effect of the run-up in the stock market on labor supply," Ing-Haw Cheng and Eric French ask if the increase in stock market wealth in the 1990s led to a decrease in labor supply. Their assessment appears in the Federal Reserve Bank of Chicago journal, *Economic Perspectives*, Fourth Quarter 2000.

Cheng, a student at the University of Chicago, and French, an economist at the Federal Reserve Bank of Chicago, provide evidence that much of the increase in stock prices in the 1990s was unanticipated. Their figures show that $1 invested in the stock market on December 31, 1994, would have reached $2.82 on December 31, 1999, and that $1.12 of the $1.82 gain would have been above what would have been predicted, based on historical averages.

With everything else equal, Cheng and French would expect groups with large unanticipated wealth increases to decrease their labor force participation. However, in this case, persons age 55 and more had the greatest unanticipated wealth increases (because they have the highest levels of stock wealth), and yet labor force participation rates for that age group actually increased between 1994 and 1999.

Cheng and French "believe these results imply that the run-up in the stock market has not been the primary determinant of recent changes in labor force participation rates." The authors cite other possible reasons for the rise in labor force participation of older workers, such as higher wages and improved job opportunities due to the strong economy. □

## Experience of temps

*Temps: The Many Faces of the Changing Workplace.* By Jackie Krasas Rogers. Ithaca, NY, Cornell University Press, 2000, 183 pp., bibliography. $39.95, cloth; $15.95, paper.

The temporary help work arrangement has been extensively researched and analyzed in recent years. In her book, *Temps: The Many Faces of the Changing Workplace*, Professor Jackie Krasas Rogers seeks to uncover the faces behind the data. She acknowledges the academic and statistical "conceptualizations and generalizations" of temps, but aims to focus on the arrangement using one-on-one interviews with temps and temp agency representatives. The analysis here is almost strictly sociological, framed in terms of race and gender.

Rogers' interest in the subject began when she observed temp workers being "segregated" from permanent employees at a Los Angeles insurance company she worked for in the late 1980s. Later during graduate school, she temped for a summer and later went back to this same agency to conduct interviews for this book. She conducted 35 interviews of temp clerical workers and temp agency staff between 1993 and 1996 in Los Angeles and Pennsylvania. Of the 35 interviewees, 7 were temp agency representatives. In addition to interviewing temp clerical workers, she also interviewed 14 temporary attorneys and 3 representatives of temporary lawyer agencies. Although the focus of the book is clerical temps, she wanted to compare their experiences with those of the lawyer temps.

The book is accessible and well written, although its sociological jargon may be unfamiliar to non-sociologists. The author's analysis is peppered with excerpts from interviews with the temps and agency representatives, making the book an interesting and quick read.

There are some problems with the analysis from an economist's viewpoint. Perhaps the starkest shortcoming of the study is the small, concentrated sample. The subtitle of the book, *The Many Faces of the Changing Workplace*, is misleading, not only because of the small number of interviews, but also because nearly all the interviews were conducted in Los Angeles between 1993 and 1996. As the author acknowledges, this is a particularly bad reference period because the local economy was still recovering from the 1991–92 recession. The unemployment rate from 1993–96 averaged nearly 3 percentage points higher than the national average. Moreover, while the author did interview both sexes, nearly all races, and Hispanics, many of the interviewees did not embody the typical temp. A large proportion were aspiring actors and actresses, and many were much older than the average temp worker.

Perhaps most problematic is the one-sidedness of the analysis. The author clearly takes a negative view of the industry and includes excerpts from interviews that support her view. Almost none of the clerical temps interviewed actually liked their situation, and many spoke of outright discrimination or even verbal abuse from clients or agency representatives. In contrast, data from the Current Population Survey's supplements on Contingent and Alternative Work Arrangements show that about one-third of temps actually prefer their arrangement to a permanent job. Many of the positive attributes of temping, such as flexibility, were not only ignored, but challenged by the author. In analyzing the statements of the interviewees, Rogers asserts that temps are actually in very inflexible work arrangements because many of them reported that they were reluctant to turn down an assignment for fear that the agency reps would not call them for future work. It may be that the geographically homogenous sample combined with the economic conditions at the time of the interviews skewed the results of the research toward people who were temping strictly for economic reasons rather than for personal ones. Another positive aspect of temping that the author ignores is that, particularly during downturns in the economy, temporary jobs may make the labor market more fluid. For example, during periods of poor economic conditions, temping may enable some job losers to avoid unemployment as they transfer between jobs.

Despite these problems, Rogers does shed light on some interesting issues associated with temporary work. As mentioned above, the focus of her analysis is gender, race, and class issues as they relate to temping. For example, she emphasizes the stigma attached to temping that stereotypes all temps as "flakes" who are not responsible or motivated enough to find "real" jobs. She also says that temping, especially clerical temping, is seen as women's work. Therefore, male temps experience a kind of double discrimination—first for being a temp, and second for being a male temp. Rogers also includes anecdotes that support her theory that client companies prefer young, white, female temps to minorities. Perhaps the most important point Rogers makes is that temps are, in a way, caught between two opposing interests and that they are at the mercy of both the agency and the client company. Rogers argues that neither has the temps' best interests in mind—the agency has a pool of replacements if a temp is viewed as difficult, and the client company can request another temp whenever it wants. These insights are important because they cannot be gleaned from the large body of empirical evidence that exists about temp agency workers. However, temp workers may not be as vulnerable in the tight labor market of the early 2000s as were Rogers' subjects, even if her description of the Los Angeles market is accurate.

Rogers concludes her analysis with a look at temporary attorneys. She chose temp attorneys because they differ dramatically from clerical temps due to the high prestige, pay, and education levels

that come with being a lawyer. Rogers reasoned that any similarities in experiences between the two groups must be the result of being a temp. While the hypothesis is interesting, it is curious why she chose this particular occupation. It may be very difficult to draw conclusions from this analysis because the number of temporary lawyers in the United States is quite small. For instance, there were no temps who gave their occupation as attorney in any of the three Current Population Survey supplements on Contingent and Alternative Work Arrangements. In fact, working as a temp at all is rare; only 1 in every 100 workers is employed by a temp agency in their primary job. Perhaps the analysis would have been stronger if Rogers had chosen to look at temps in more typical temp jobs such as computer-related occupations, for example.

Overall, Rogers found few similarities in the experiences of temp attorneys and their clerical counterparts. Temp attorneys were paid very well, and nearly all had chosen the arrangement for the flexibility it provided. Most of the temp lawyers were women with families who were tired of working 60-80 hour weeks in an atmosphere where, by their perceptions, having children is discouraged. Temping allowed them to continue practicing law on their own terms. One similarity Rogers did see between clerical and lawyer temps was that in many cases both groups were given "busy work" or routine, monotonous duties. Rogers calls this "deskilling" in her analysis. For clerical temps this often took the form of filing or answering phones, and for attorneys such duties might include making 1-day court appearances or appearing at depositions. The weakness with this observation is that the author had no control group to compare the temps to. It could almost certainly be argued that workers in "regular" clerical and legal jobs sometimes perform tasks that are monotonous. Temp attorneys also reported feeling that there was a stigma attached with temping—that it was a "mommy job." However, most considered themselves to be "contractors" rather than temps and did not view their situations as inferior.

Although this anecdotal analysis was one-sided and the subjects were not necessarily representative of temp workers in general, it is useful in presenting some of the negative experiences that temporary help workers encounter in their day-to-day work lives. The book may be of particular interest for those who wish to improve the working conditions of temps, as well as for the agency representatives who must strive to make temp work more attractive to workers in a tight labor market.

—Marisa DiNatale

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# Publications received

## Economic and social statistics

Fernandez, Raquel and Richard Rogerson, *Sorting and Long-Run Inequality.* Cambridge, MA, National Bureau of Economic Research, Inc., 2000, 35 pp. (Working Paper 7508.) $10 per copy, plus $10 for postage and handling outside the United States.

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## Worker training and development

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This section of the *Review* presents the principal statistical series collected and calculated by the Bureau of Labor Statistics: series on labor force; employment; unemployment; labor compensation; consumer, producer, and international prices; productivity; international comparisons; and injury and illness statistics. In the notes that follow, the data in each group of tables are briefly described; key definitions are given; notes on the data are set forth; and sources of additional information are cited.

## General notes

The following notes apply to several tables in this section:

**Seasonal adjustment**. Certain monthly and quarterly data are adjusted to eliminate the effect on the data of such factors as climatic conditions, industry production schedules, opening and closing of schools, holiday buying periods, and vacation practices, which might prevent short-term evaluation of the statistical series. Tables containing data that have been adjusted are identified as "seasonally adjusted." (All other data are not seasonally adjusted.) Seasonal effects are estimated on the basis of past experience. When new seasonal factors are computed each year, revisions may affect seasonally adjusted data for several preceding years.

Seasonally adjusted data appear in tables 1–14, 16–17, 39, and 43. Seasonally adjusted labor force data in tables 1 and 4–9 were revised in the February 2001 issue of the *Review*. Seasonally adjusted establishment survey data shown in tables 1, 12–14 and 16–17 were revised in the July 2000 *Review* and reflect the experience through March 2000. A brief explanation of the seasonal adjustment methodology appears in "Notes on the data."

Revisions in the productivity data in table 45 are usually introduced in the September issue. Seasonally adjusted indexes and percent changes from month-to-month and quarter-to-quarter are published for numerous Consumer and Producer Price Index series. However, seasonally adjusted indexes are not published for the U.S. average All-Items CPI. Only seasonally adjusted percent changes are available for this series.

**Adjustments for price changes**. Some data—such as the "real" earnings shown in table 14—are adjusted to eliminate the effect of changes in price. These adjustments are made by dividing current-dollar values by the Consumer Price Index or the appropriate component of the index, then multiplying by 100. For example, given a current hourly wage rate of $3 and a current price index number of 150, where 1982 = 100, the hourly rate expressed in 1982 dollars is $2 ($3/150 x 100 = $2). The $2 (or any other resulting values) are described as "real," "constant," or "1982" dollars.

## Sources of information

Data that supplement the tables in this section are published by the Bureau in a variety of sources. Definitions of each series and notes on the data are contained in later sections of these Notes describing each set of data. For detailed descriptions of each data series, see *BLS Handbook of Methods*, Bulletin 2490. Users also may wish to consult *Major Programs of the Bureau of Labor Statistics*, Report 919. News releases provide the latest statistical information published by the Bureau; the major recurring releases are published according to the schedule appearing on the back cover of this issue.

More information about labor force, employment, and unemployment data and the household and establishment surveys underlying the data are available in the Bureau's monthly publication, *Employment and Earnings*. Historical unadjusted and seasonally adjusted data from the household survey are available on the Internet:

http://stats.bls.gov/cpshome.htm

Historically comparable unadjusted and seasonally adjusted data from the establishment survey also are available on the Internet:

http://stats.bls.gov/ceshome.htm

Additional information on labor force data for areas below the national level are provided in the BLS annual report, *Geographic Profile of Employment and Unemployment*.

For a comprehensive discussion of the Employment Cost Index, see *Employment Cost Indexes and Levels, 1975–95*, BLS Bulletin 2466. The most recent data from the Employee Benefits Survey appear in the following Bureau of Labor Statistics bulletins: *Employee Benefits in Medium and Large Firms; Employee Benefits in Small Private Establishments;* and *Employee Benefits in State and Local Governments*.

More detailed data on consumer and producer prices are published in the monthly periodicals, *The CPI Detailed Report* and *Producer Price Indexes*. For an overview of the 1998 revision of the CPI, see the December 1996 issue of the *Monthly Labor Review*. Additional data on international prices appear in monthly news releases.

Listings of industries for which productivity indexes are available may be found on the Internet:

http://stats.bls.gov/iprhome.htm

For additional information on international comparisons data, see *International Comparisons of Unemployment*, BLS Bulletin 1979.

Detailed data on the occupational injury and illness series are published in *Occupational Injuries and Illnesses in the United States, by Industry*, a BLS annual bulletin.

Finally, the *Monthly Labor Review* carries analytical articles on annual and longer term developments in labor force, employment, and unemployment; employee compensation and collective bargaining; prices; productivity; international comparisons; and injury and illness data.

## Symbols

n.e.c. = not elsewhere classified.
n.e.s. = not elsewhere specified.
p = preliminary. To increase the timeliness of some series, preliminary figures are issued based on representative but incomplete returns.
r = revised. Generally, this revision reflects the availability of later data, but also may reflect other adjustments.

# Comparative Indicators

(Tables 1–3)

Comparative indicators tables provide an overview and comparison of major BLS statistical series. Consequently, although many of the included series are available monthly, all measures in these comparative tables are presented quarterly and annually.

**Labor market indicators** include employment measures from two major surveys and information on rates of change in compensation provided by the Employment Cost Index (ECI) program. The labor force participation rate, the employment-to-population ratio, and unemployment rates for major demographic groups based on the Current Population ("household") Survey are presented, while measures of employment and average weekly hours by major industry sector are given using nonfarm payroll data. The Employment Cost Index (compensation), by major sector and by bargaining status, is chosen from a variety of BLS compensation and wage measures because it provides a comprehensive measure of employer costs for hiring labor, not just outlays for wages, and it is not affected by employment shifts among occupations and industries.

Data on **changes in compensation, prices, and productivity** are presented in table 2.

Measures of rates of change of compensation and wages from the Employment Cost Index program are provided for all civilian nonfarm workers (excluding Federal and household workers) and for all private nonfarm workers. Measures of changes in consumer prices for all urban consumers; producer prices by stage of processing; overall prices by stage of processing; and overall export and import price indexes are given. Measures of productivity (output per hour of all persons) are provided for major sectors.

**Alternative measures of wage and compensation rates of change**, which reflect the overall trend in labor costs, are summarized in table 3. Differences in concepts and scope, related to the specific purposes of the series, contribute to the variation in changes among the individual measures.

### Notes on the data

Definitions of each series and notes on the data are contained in later sections of these notes describing each set of data.

## Employment and Unemployment Data

(Tables 1; 4–20)

### Household survey data

#### Description of the series

EMPLOYMENT DATA in this section are obtained from the Current Population Survey, a program of personal interviews conducted monthly by the Bureau of the Census for the Bureau of Labor Statistics. The sample consists of about 50,000 households selected to represent the U.S. population 16 years of age and older. Households are interviewed on a rotating basis, so that three-fourths of the sample is the same for any 2 consecutive months.

#### Definitions

**Employed persons** include (1) all those who worked for pay any time during the week which includes the 12th day of the month or who worked unpaid for 15 hours or more in a family-operated enterprise and (2) those who were temporarily absent from their regular jobs because of illness, vacation, industrial dispute, or similar reasons. A person working at more than one job is counted only in the job at which he or she worked the greatest number of hours.

**Unemployed persons** are those who did not work during the survey week, but were available for work except for temporary illness and had looked for jobs within the preceding 4 weeks. Persons who did not look for work because they were on layoff are also counted among the unemployed. **The unemployment rate** represents the number unemployed as a percent of the civilian labor force.

The **civilian labor force** consists of all employed or unemployed persons in the civilian noninstitutional population. Persons **not in the labor force** are those not classified as employed or unemployed. This group includes discouraged workers, defined as persons who want and are available for a job and who have looked for work sometime in the past 12 months (or since the end of their last job if they held one within the past 12 months), but are not currently looking, because they believe there are no jobs available or there are none for which they would qualify. The **civilian noninstitutional population** comprises all persons 16 years of age and older who are not inmates of penal or mental institutions, sanitariums, or homes for the aged, infirm, or needy. The **civilian labor force participation** rate is the proportion of the civilian noninstitutional population that is in the labor force. The **employment-population ratio** is employment as a percent of the civilian noninstitutional population.

#### Notes on the data

From time to time, and especially after a decennial census, adjustments are made in the Current Population Survey figures to correct for estimating errors during the intercensal years. These adjustments affect the comparability of historical data. A description of these adjustments and their effect on the various data series appears in the Explanatory Notes of *Employment and Earnings*.

Labor force data in tables 1 and 4–9 are seasonally adjusted. Since January 1980, national labor force data have been seasonally adjusted with a procedure called X-11 ARIMA which was developed at Statistics Canada as an extension of the standard X-11 method previously used by BLS. A detailed description of the procedure appears in the X-11 *ARIMA Seasonal Adjustment Method*, by Estela Bee Dagum (Statistics Canada, Catalogue No. 12-564E, January 1983).

At the beginning of each calendar year, historical seasonally adjusted data usually are revised, and projected seasonal adjustment factors are calculated for use during the January–June period. The historical seasonally adjusted data usually are revised for only the most recent 5 years. In July, new seasonal adjustment factors, which incorporate the experience through June, are produced for the July–December period, but no revisions are made in the historical data.

FOR ADDITIONAL INFORMATION on national household survey data, contact the Division of Labor Force Statistics: (202) 691–6378.

### Establishment survey data

#### Description of the series

EMPLOYMENT, HOURS, AND EARNINGS DATA in this section are compiled from payroll records reported monthly on a voluntary basis to the Bureau of Labor Statistics and its cooperating State agencies by about 300,000 establishments representing all industries except agriculture. Industries are classified in accordance with the 1987 *Standard Industrial Classification (SIC) Manual*. In most industries, the sampling probabilities are based on the size of the establishment; most large establishments are therefore in the sample. (An establishment is not necessarily a firm; it may be a branch plant, for example, or warehouse.) Self-employed persons and others not on a regular civilian payroll are outside the scope of the survey because they are excluded from establishment records. This largely accounts for the difference in employment figures between the household and establishment surveys.

#### Definitions

An **establishment** is an economic unit which produces goods or services (such as a factory or store) at a single location and is engaged in one type of economic activity.

**Employed persons** are all persons who received pay (including holiday and sick pay) for any part of the payroll period including the 12th day of the month. Persons holding more than one job (about 5 percent of all persons in the labor force) are counted in each establishment which reports them.

**Production workers** in manufacturing include working supervisors and nonsupervisory workers closely associated with production operations. Those workers mentioned in tables 11–16 include production workers in manufacturing and mining; construction workers in construction; and nonsupervisory workers in the following industries: transportation and public utilities; wholesale and retail trade; finance, insurance, and real estate; and services. These groups account for about four-fifths of the total employment on private nonagricultural payrolls.

**Earnings** are the payments production or nonsupervisory workers receive during the survey period, including premium pay

for overtime or late-shift work but excluding irregular bonuses and other special payments. **Real earnings** are earnings adjusted to reflect the effects of changes in consumer prices. The deflator for this series is derived from the Consumer Price Index for Urban Wage Earners and Clerical Workers (CPI-W).

**Hours** represent the average weekly hours of production or nonsupervisory workers for which pay was received, and are different from standard or scheduled hours. **Overtime hours** represent the portion of average weekly hours which was in excess of regular hours and for which overtime premiums were paid.

The **Diffusion Index** represents the percent of industries in which employment was rising over the indicated period, plus one-half of the industries with unchanged employment; 50 percent indicates an equal balance between industries with increasing and decreasing employment. In line with Bureau practice, data for the 1-, 3-, and 6-month spans are seasonally adjusted, while those for the 12-month span are unadjusted. Data are centered within the span. Table 17 provides an index on private nonfarm employment based on 356 industries, and a manufacturing index based on 139 industries. These indexes are useful for measuring the dispersion of economic gains or losses and are also economic indicators.

### Notes on the data

Establishment survey data are annually adjusted to comprehensive counts of employment (called "benchmarks"). The latest adjustment, which incorporated March 1999 benchmarks, was made with the release of May 2000 data, published in the July 2000 issue of the *Review*. Coincident with the benchmark adjustment, historical seasonally adjusted data were revised to reflect updated seasonal factors. Unadjusted data from April 1999 forward and seasonally adjusted data from January 1996 forward are subject to revision in future benchmarks.

In addition to the routine benchmark revisions and updated seasonal factors introduced with the release of the May 2000 data, all estimates for the wholesale trade division from April 1998 forward were revised to incorporate a new sample design. This represented the first major industry division to convert to a probability-based sample under a 4-year phase-in plan for the establishment survey sample redesign project. For additional information, see the the June 2000 issue of *Employment and Earnings*.

Revisions in State data (table 11) occurred with the publication of January 2000 data.

Beginning in June 1996, the BLS uses the X-12 ARIMA methodology to seasonally adjust establishment survey data. This procedure, developed by the Bureau of the Census, controls for the effect of varying survey intervals (also known as the 4- versus 5-week effect), thereby providing improved measurement of over-the-month changes and underlying economic trends. Revisions of data, usually for the most recent 5-year period, are made once a year coincident with the benchmark revisions.

In the establishment survey, estimates for the most recent 2 months are based on incomplete returns and are published as preliminary in the tables (12–17 in the *Review*). When all returns have been received, the estimates are revised and published as "final" (prior to any benchmark revisions) in the third month of their appearance. Thus, December data are published as preliminary in January and February and as final in March. For the same reasons, quarterly establishment data (table 1) are preliminary for the first 2 months of publication and final in the third month. Thus, fourth-quarter data are published as preliminary in January and February and as final in March.

FOR ADDITIONAL INFORMATION on establishment survey data, contact the Division of Monthly Industry Employment Statistics: (202) 691–6555.

## Unemployment data by State

### Description of the series

Data presented in this section are obtained from the Local Area Unemployment Statistics (LAUS) program, which is conducted in cooperation with State employment security agencies.

Monthly estimates of the labor force, employment, and unemployment for States and sub-State areas are a key indicator of local economic conditions, and form the basis for determining the eligibility of an area for benefits under Federal economic assistance programs such as the Job Training Partnership Act. Seasonally adjusted unemployment rates are presented in table 10. Insofar as possible, the concepts and definitions underlying these data are those used in the national estimates obtained from the CPS.

### Notes on the data

Data refer to State of residence. Monthly data for all States and the District of Columbia are derived using standardized procedures established by BLS. Once a year, estimates are revised to new population controls, usually with publication of January estimates, and benchmarked to annual average CPS levels.

FOR ADDITIONAL INFORMATION on data in this series, call (202) 691–6392 (table 10) or (202) 691–6559 (table 11).

## Compensation and Wage Data

(Tables 1–3; 21–27)

COMPENSATION AND WAGE DATA are gathered by the Bureau from business establishments, State and local governments, labor unions, collective bargaining agreements on file with the Bureau, and secondary sources.

## Employment Cost Index

### Description of the series

The **Employment Cost Index** (ECI) is a quarterly measure of the rate of change in compensation per hour worked and includes wages, salaries, and employer costs of employee benefits. It uses a fixed market basket of labor—similar in concept to the Consumer Price Index's fixed market basket of goods and services—to measure change over time in employer costs of employing labor.

Statistical series on total compensation costs, on wages and salaries, and on benefit costs are available for private nonfarm workers excluding proprietors, the self-employed, and household workers. The total compensation costs and wages and salaries series are also available for State and local government workers and for the civilian nonfarm economy, which consists of private industry and State and local government workers combined. Federal workers are excluded.

The Employment Cost Index probability sample consists of about 4,400 private nonfarm establishments providing about 23,000 occupational observations and 1,000 State and local government establishments providing 6,000 occupational observations selected to represent total employment in each sector. On average, each reporting unit provides wage and compensation information on five well-specified occupations. Data are collected each quarter for the pay period including the 12th day of March, June, September, and December.

Beginning with June 1986 data, fixed employment weights from the 1980 Census of Population are used each quarter to calculate the civilian and private indexes and the index for State and local governments. (Prior to June 1986, the employment weights are from the 1970 Census of Population.) These fixed weights, also used to derive all of the industry and occupation series indexes, ensure that changes in these indexes reflect only changes in compensation, not employment shifts among industries or occupations with different levels of

wages and compensation. For the bargaining status, region, and metropolitan/non-metropolitan area series, however, employment data by industry and occupation are not available from the census. Instead, the 1980 employment weights are reallocated within these series each quarter based on the current sample. Therefore, these indexes are not strictly comparable to those for the aggregate, industry, and occupation series.

### Definitions

**Total compensation** costs include wages, salaries, and the employer's costs for employee benefits.

**Wages and salaries** consist of earnings before payroll deductions, including production bonuses, incentive earnings, commissions, and cost-of-living adjustments.

**Benefits** include the cost to employers for paid leave, supplemental pay (including nonproduction bonuses), insurance, retirement and savings plans, and legally required benefits (such as Social Security, workers' compensation, and unemployment insurance).

Excluded from wages and salaries and employee benefits are such items as payment-in-kind, free room and board, and tips.

### Notes on the data

The Employment Cost Index for changes in wages and salaries in the private nonfarm economy was published beginning in 1975. Changes in total compensation cost—wages and salaries and benefits combined—were published beginning in 1980. The series of changes in wages and salaries and for total compensation in the State and local government sector and in the civilian nonfarm economy (excluding Federal employees) were published beginning in 1981. Historical indexes (June 1981=100) are available on the Internet:

http://stats.bls.gov/ecthome.htm

FOR ADDITIONAL INFORMATION on the Employment Cost Index, contact the Office of Compensation Levels and Trends: (202) 691–6199.

## Employee Benefits Survey

### Description of the series

**Employee benefits** data are obtained from the Employee Benefits Survey, an annual survey of the incidence and provisions of selected benefits provided by employers. The survey collects data from a sample of approximately 9,000 private sector and State and local government establishments. The data are presented as a percentage of employees who participate in a certain benefit, or as an average benefit provision (for example, the average number of paid holidays provided to employees per year). Selected data from the survey are presented in table 25 for medium and large private establishments and in table 26 for small private establishments and State and local government.

The survey covers paid leave benefits such as holidays and vacations, and personal, funeral, jury duty, military, family, and sick leave; short-term disability, long-term disability, and life insurance; medical, dental, and vision care plans; defined benefit and defined contribution plans; flexible benefits plans; reimbursement accounts; and unpaid family leave.

Also, data are tabulated on the incidence of several other benefits, such as severance pay, child-care assistance, wellness programs, and employee assistance programs.

### Definitions

**Employer-provided benefits** are benefits that are financed either wholly or partly by the employer. They may be sponsored by a union or other third party, as long as there is some employer financing. However, some benefits that are fully paid for by the employee also are included. For example, long-term care insurance and postretirement life insurance paid entirely by the employee are included because the guarantee of insurability and availability at group premium rates are considered a benefit.

**Participants** are workers who are covered by a benefit, whether or not they use that benefit. If the benefit plan is financed wholly by employers and requires employees to complete a minimum length of service for eligibility, the workers are considered participants whether or not they have met the requirement. If workers are required to contribute towards the cost of a plan, they are considered participants only if they elect the plan and agree to make the required contributions.

**Defined benefit pension plans** use predetermined formulas to calculate a retirement benefit (if any), and obligate the employer to provide those benefits. Benefits are generally based on salary, years of service, or both.

**Defined contribution plans** generally specify the level of employer and employee contributions to a plan, but not the formula for determining eventual benefits. Instead, individual accounts are set up for participants, and benefits are based on amounts credited to these accounts.

**Tax-deferred savings plans** are a type of defined contribution plan that allow participants to contribute a portion of their salary to an employer-sponsored plan and defer income taxes until withdrawal.

**Flexible benefit plans** allow employees to choose among several benefits, such as life insurance, medical care, and vacation days, and among several levels of coverage within a given benefit.

### Notes on the data

Surveys of employees in medium and large establishments conducted over the 1979–86 period included establishments that employed at least 50, 100, or 250 workers, depending on the industry (most service industries were excluded). The survey conducted in 1987 covered only State and local governments with 50 or more employees. The surveys conducted in 1988 and 1989 included medium and large establishments with 100 workers or more in private industries. All surveys conducted over the 1979–89 period excluded establishments in Alaska and Hawaii, as well as part-time employees.

Beginning in 1990, surveys of State and local governments and small private establishments were conducted in even-numbered years, and surveys of medium and large establishments were conducted in odd-numbered years. The small establishment survey includes all private nonfarm establishments with fewer than 100 workers, while the State and local government survey includes all governments, regardless of the number of workers. All three surveys include full- and part-time workers, and workers in all 50 States and the District of Columbia.

FOR ADDITIONAL INFORMATION on the Employee Benefits Survey, contact the Office of Compensation Levels and Trends on the Internet:

**http://stats.bls.gov/ebshome.htm**

## Work stoppages

### Description of the series

Data on work stoppages measure the number and duration of major strikes or lockouts (involving 1,000 workers or more) occurring during the month (or year), the number of workers involved, and the amount of work time lost because of stoppage. These data are presented in table 27.

Data are largely from a variety of published sources and cover only establishments directly involved in a stoppage. They do not measure the indirect or secondary effect of stoppages on other establishments whose employees are idle owing to material shortages or lack of service.

### Definitions

**Number of stoppages**: The number of strikes and lockouts involving 1,000 workers or more and lasting a full shift or longer.

**Workers involved**: The number of

workers directly involved in the stoppage.

**Number of days idle**: The aggregate number of workdays lost by workers involved in the stoppages.

**Days of idleness as a percent of estimated working time**: Aggregate workdays lost as a percent of the aggregate number of standard workdays in the period multiplied by total employment in the period.

### Notes on the data

This series is not comparable with the one terminated in 1981 that covered strikes involving six workers or more.

FOR ADDITIONAL INFORMATION on work stoppages data, contact the Office of Compensation and Working Conditions: (202) 691–6282, or the Internet:

**http://stats.bls.gov/cbahome.htm**

## Price Data

(Tables 2; 28–38)

PRICE DATA are gathered by the Bureau of Labor Statistics from retail and primary markets in the United States. Price indexes are given in relation to a base period—1982 = 100 for many Producer Price Indexes, 1982–84 = 100 for many Consumer Price Indexes (unless otherwise noted), and 1990 = 100 for International Price Indexes.

## Consumer Price Indexes

### Description of the series

The **Consumer Price Index** (CPI) is a measure of the average change in the prices paid by urban consumers for a fixed market basket of goods and services. The CPI is calculated monthly for two population groups, one consisting only of urban households whose primary source of income is derived from the employment of wage earners and clerical workers, and the other consisting of all urban households. The wage earner index (CPI-W) is a continuation of the historic index that was introduced well over a half-century ago for use in wage negotiations. As new uses were developed for the CPI in recent years, the need for a broader and more representative index became apparent. The all-urban consumer index (CPI-U), introduced in 1978, is representative of the 1993–95 buying habits of about 87 percent of the noninstitutional population of the United States at that time, compared with 32 percent represented in the CPI-W. In addition to wage earners and clerical workers, the CPI-U covers professional, managerial, and technical workers, the self-employed, short-term workers, the unemployed, retirees, and others not in the labor force.

The CPI is based on prices of food, clothing, shelter, fuel, drugs, transportation fares, doctors' and dentists' fees, and other goods and services that people buy for day-to-day living. The quantity and quality of these items are kept essentially unchanged between major revisions so that only price changes will be measured. All taxes directly associated with the purchase and use of items are included in the index.

Data collected from more than 23,000 retail establishments and 5,800 housing units in 87 urban areas across the country are used to develop the "U.S. city average." Separate estimates for 14 major urban centers are presented in table 29. The areas listed are as indicated in footnote 1 to the table. The area indexes measure only the average change in prices for each area since the base period, and do not indicate differences in the level of prices among cities.

### Notes on the data

In January 1983, the Bureau changed the way in which homeownership costs are meaured for the CPI-U. A rental equivalence method replaced the asset-price approach to homeownership costs for that series. In January 1985, the same change was made in the CPI-W. The central purpose of the change was to separate shelter costs from the investment component of home-ownership so that the index would reflect only the cost of shelter services provided by owner-occupied homes. An updated CPI-U and CPI-W were introduced with release of the January 1987 and January 1998 data.

FOR ADDITIONAL INFORMATION on consumer prices, contact the Division of Consumer Prices and Price Indexes: (202) 691–7000.

## Producer Price Indexes

### Description of the series

**Producer Price Indexes** (PPI) measure average changes in prices received by domestic producers of commodities in all stages of processing. The sample used for calculating these indexes currently contains about 3,200 commodities and about 80,000 quotations per month, selected to represent the movement of prices of all commodities produced in the manufacturing; agriculture, forestry, and fishing; mining; and gas and electricity and public utilities sectors. The stage-of-processing structure of PPI organizes products by class of buyer and degree of fabrication (that is, finished goods, intermediate goods, and crude materials). The traditional commodity structure of PPI organizes products by similarity of end use or material composition. The industry and product structure of PPI organizes data in accordance with the Standard Industrial Classification (SIC) and the product code extension of the SIC developed by the U.S. Bureau of the Census.

To the extent possible, prices used in calculating Producer Price Indexes apply to the first significant commercial transaction in the United States from the production or central marketing point. Price data are generally collected monthly, primarily by mail questionnaire. Most prices are obtained directly from producing companies on a voluntary and confidential basis. Prices generally are reported for the Tuesday of the week containing the 13th day of the month.

Since January 1992, price changes for the various commodities have been averaged together with implicit quantity weights representing their importance in the total net selling value of all commodities as of 1987. The detailed data are aggregated to obtain indexes for stage-of-processing groupings, commodity groupings, durability-of-product groupings, and a number of special composite groups. All Producer Price Index data are subject to revision 4 months after original publication.

FOR ADDITIONAL INFORMATION on producer prices, contact the Division of Industrial Prices and Price Indexes: (202) 691–7705.

## International Price Indexes

### Description of the series

The **International Price Program** produces monthly and quarterly export and import price indexes for nonmilitary goods traded between the United States and the rest of the world. The export price index provides a measure of price change for all products sold by U.S. residents to foreign buyers. ("Residents" is defined as in the national income accounts; it includes corporations, businesses, and individuals, but does not require the organizations to be U.S. owned nor the individuals to have U.S. citizenship.) The import price index provides a measure of price change for goods purchased from other countries by U.S. residents.

The product universe for both the import and export indexes includes raw materials, agricultural products, semifinished manufactures, and finished manufactures, including both capital and consumer goods. Price data for these items are collected primarily by mail questionnaire. In nearly all cases, the data are collected directly from the exporter or importer, although in a few cases, prices are obtained from other sources.

To the extent possible, the data gathered refer to prices at the U.S. border for exports and at either the foreign border or the U.S. border for imports. For nearly all products,

the prices refer to transactions completed during the first week of the month. Survey respondents are asked to indicate all discounts, allowances, and rebates applicable to the reported prices, so that the price used in the calculation of the indexes is the actual price for which the product was bought or sold.

In addition to general indexes of prices for U.S. exports and imports, indexes are also published for detailed product categories of exports and imports. These categories are defined according to the five-digit level of detail for the Bureau of Economic Analysis End-use Classification (SITC), and the four-digit level of detail for the Harmonized System. Aggregate import indexes by country or region of origin are also available.

BLS publishes indexes for selected categories of internationally traded services, calculated on an international basis and on a balance-of-payments basis.

### Notes on the data

The export and import price indexes are weighted indexes of the Laspeyres type. Price relatives are assigned equal importance within each harmonized group and are then aggregated to the higher level. The values assigned to each weight category are based on trade value figures compiled by the Bureau of the Census. The trade weights currently used to compute both indexes relate to 1990.

Because a price index depends on the same items being priced from period to period, it is necessary to recognize when a product's specifications or terms of transaction have been modified. For this reason, the Bureau's questionnaire requests detailed descriptions of the physical and functional characteristics of the products being priced, as well as information on the number of units bought or sold, discounts, credit terms, packaging, class of buyer or seller, and so forth. When there are changes in either the specifications or terms of transaction of a product, the dollar value of each change is deleted from the total price change to obtain the "pure" change. Once this value is determined, a linking procedure is employed which allows for the continued repricing of the item.

For the export price indexes, the preferred pricing is f.a.s. (free alongside ship) U.S. port of exportation. When firms report export prices f.o.b. (free on board), production point information is collected which enables the Bureau to calculate a shipment cost to the port of exportation. An attempt is made to collect two prices for imports. The first is the import price f.o.b. at the foreign port of exportation, which is consistent with the basis for valuation of imports in the national accounts. The second is the import price c.i.f.(costs, insurance, and freight) at the U.S. port of importation, which also includes the other costs associated with bringing the product to the U.S. border. It does not, however, include duty charges. For a given product, only one price basis series is used in the construction of an index.

FOR ADDITIONAL INFORMATION on international prices, contact the Division of International Prices: (202) 691–7155.

## Productivity Data

(Tables 2; 39–42)

## Business sector and major sectors

### Description of the series

The productivity measures relate real output to real input. As such, they encompass a family of measures which include single-factor input measures, such as output per hour, output per unit of labor input, or output per unit of capital input, as well as measures of multifactor productivity (output per unit of combined labor and capital inputs). The Bureau indexes show the change in output relative to changes in the various inputs. The measures cover the business, nonfarm business, manufacturing, and nonfinancial corporate sectors.

Corresponding indexes of hourly compensation, unit labor costs, unit nonlabor payments, and prices are also provided.

### Definitions

**Output per hour of all persons** (labor productivity) is the quantity of goods and services produced per hour of labor input. **Output per unit of capital services** (capital productivity) is the quantity of goods and services produced per unit of capital services input. **Multifactor productivity** is the quantity of goods and services produced per combined inputs. For private business and private nonfarm business, inputs include labor and capital units. For manufacturing, inputs include labor, capital, energy, non-energy materials, and purchased business services.

**Compensation per hour** is total compensation divided by hours at work. Total compensation equals the wages and salaries of employees plus employers' contributions for social insurance and private benefit plans, plus an estimate of these payments for the self-employed (except for nonfinancial corporations in which there are no self-employed). **Real compensation per hour** is compensation per hour deflated by the change in the Consumer Price Index for All Urban Consumers.

**Unit labor costs** are the labor compensation costs expended in the production of a unit of output and are derived by dividing compensation by output. **Unit nonlabor payments** include profits, depreciation, interest, and indirect taxes per unit of output. They are computed by subtracting compensation of all persons from current-dollar value of output and dividing by output.

**Unit nonlabor costs** contain all the components of unit nonlabor payments except unit profits.

**Unit profits** include corporate profits with inventory valuation and capital consumption adjustments per unit of output.

**Hours of all persons** are the total hours at work of payroll workers, self-employed persons, and unpaid family workers.

**Labor inputs** are hours of all persons adjusted for the effects of changes in the education and experience of the labor force.

**Capital services** are the flow of services from the capital stock used in production. It is developed from measures of the net stock of physical assets—equipment, structures, land, and inventories—weighted by rental prices for each type of asset.

**Combined units of labor and capital inputs** are derived by combining changes in labor and capital input with weights which represent each component's share of total cost. Combined units of labor, capital, energy, materials, and purchased business services are similarly derived by combining changes in each input with weights that represent each input's share of total costs. The indexes for each input and for combined units are based on changing weights which are averages of the shares in the current and preceding year (the Tornquist index-number formula).

### Notes on the data

Business sector output is an annually-weighted index constructed by excluding from real gross domestic product (GDP) the following outputs: general government, nonprofit institutions, paid employees of private households, and the rental value of owner-occupied dwellings. Nonfarm business also excludes farming. Private business and private nonfarm business further exclude government enterprises. The measures are supplied by the U.S. Department of Commerce's Bureau of Economic Analysis. Annual estimates of manufacturing sectoral output are produced by the Bureau of Labor Statistics. Quarterly manufacturing output indexes from the Federal Reserve Board are adjusted to these annual output measures by the BLS. Compensation data are developed from data of the Bureau of Economic Analysis and the Bureau of Labor Statistics. Hours data are developed from data of the Bureau of Labor Statistics.

The productivity and associated cost measures in tables 39–42 describe the relation-

ship between output in real terms and the labor and capital inputs involved in its production. They show the changes from period to period in the amount of goods and services produced per unit of input.

Although these measures relate output to hours and capital services, they do not measure the contributions of labor, capital, or any other specific factor of production. Rather, they reflect the joint effect of many influences, including changes in technology; shifts in the composition of the labor force; capital investment; level of output; changes in the utilization of capacity, energy, material, and research and development; the organization of production; managerial skill; and characteristics and efforts of the work force.

FOR ADDITIONAL INFORMATION on this productivity series, contact the Division of Productivity Research: (202) 691–5606.

## Industry productivity measures

### Description of the series

The BLS industry productivity data supplement the measures for the business economy and major sectors with annual measures of labor productivity for selected industries at the three- and four-digit levels of the Standard Industrial Classification system. In addition to labor productivity, the industry data also include annual measures of compensation and unit labor costs for three-digit industries and measures of multifactor productivity for three-digit manufacturing industries and railroad transportation. The industry measures differ in methodology and data sources from the productivity measures for the major sectors because the industry measures are developed independently of the National Income and Product Accounts framework used for the major sector measures.

### Definitions

**Output per hour** is derived by dividing an index of industry output by an index of labor input. For most industries, **output** indexes are derived from data on the value of industry output adjusted for price change. For the remaining industries, output indexes are derived from data on the physical quantity of production.

The **labor input** series consist of the hours of all employees (production workers and nonproduction workers), the hours of all persons (paid employees, partners, proprietors, and unpaid family workers), or the number of employees, depending upon the industry.

**Unit labor costs** represent the labor compensation costs per unit of output produced, and are derived by dividing an index of labor compensation by an index of output. **Labor compensation** includes payroll as well as supplemental payments, including both legally required expenditures and payments for voluntary programs.

**Multifactor productivity** is derived by dividing an index of industry output by an index of the combined inputs consumed in producing that output. **Combined inputs** include capital, labor, and intermediate purchases. The measure of **capital input** used represents the flow of services from the capital stock used in production. It is developed from measures of the net stock of physical assets—equipment, structures, land, and inventories. The measure of **intermediate purchases** is a combination of purchased materials, services, fuels, and electricity.

### Notes on the data

The industry measures are compiled from data produced by the Bureau of Labor Statistics and the Bureau of the Census, with additional data supplied by other government agencies, trade associations, and other sources.

For most industries, the productivity indexes refer to the output per hour of all employees. For some trade and services industries, indexes of output per hour of all persons (including self-employed) are constructed. For some transportation industries, only indexes of output per employee are prepared.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Industry Productivity Studies: (202) 691–5618.

## International Comparisons

(Tables 43–45)

## Labor force and unemployment

### Description of the series

Tables 43 and 44 present comparative measures of the labor force, employment, and unemployment—approximating U.S. concepts—for the United States, Canada, Australia, Japan, and several European countries. The unemployment statistics (and, to a lesser extent, employment statistics) published by other industrial countries are not, in most cases, comparable to U.S. unemployment statistics. Therefore, the Bureau adjusts the figures for selected countries, where necessary, for all known major definitional differences. Although precise comparability may not be achieved, these adjusted figures provide a better basis for international comparisons than the figures regularly published by each country.

### Definitions

For the principal U.S. definitions of the **labor force**, **employment**, and **unemployment**, see the Notes section on Employment and Unemployment Data: Household survey data.

### Notes on the data

The adjusted statistics have been adapted to the age at which compulsory schooling ends in each country, rather than to the U.S. standard of 16 years of age and older. Therefore, the adjusted statistics relate to the population aged 16 and older in France, Sweden, and the United Kingdom; 15 and older in Canada, Australia, Japan, Germany, Italy from 1993 onward, and the Netherlands; and 14 and older in Italy prior to 1993. The institutional population is included in the denominator of the labor force participation rates and employment-population ratios for Japan and Germany; it is excluded for the United States and the other countries.

In the U.S. labor force survey, persons on layoff who are awaiting recall to their jobs are classified as unemployed. European and Japanese layoff practices are quite different in nature from those in the United States; therefore, strict application of the U.S. definition has not been made on this point. For further information, see *Monthly Labor Review*, December 1981, pp. 8–11.

The figures for one or more recent years for France, Germany, Italy, the Netherlands, and the United Kingdom are calculated using adjustment factors based on labor force surveys for earlier years and are considered preliminary. The recent-year measures for these countries, therefore, are subject to revision whenever data from more current labor force surveys become available.

There are breaks in the data series for the United States (1990, 1994, 1997, 1998), France (1992), Italy (1991, 1993), the Netherlands (1988), and Sweden (1987).

For the United States, the break in series reflects a major redesign of the labor force survey questionnaire and collection methodology introduced in January 1994. Revised population estimates based on the 1990 census, adjusted for the estimated undercount, also were incorporated. In 1996, previously published data for the 1990–93 period were revised to reflect the 1990 census-based population controls, adjusted for the undercount. In 1997, revised population controls were introduced into the household survey. Therefore, the data are not strictly conparable with prior years. In 1998, new composite estimation procedures and minor revisions in population controls were intro-

duced into the household survey. Therefore, the data are not strictly comparable with data for 1997 and earlier years. See the Notes section on Employment and Unemployment Data of this *Review*.

For France, the 1992 break reflects the substitution of standardized European Union Statistical Office (EUROSTAT) unemployment statistics for the unemployment data estimated according to the International Labor Office (ILO) definition and published in the Organization for Economic Cooperation and Development (OECD) annual yearbook and quarterly update. This change was made because the EUROSTAT data are more up-to-date than the OECD figures. Also, since 1992, the EUROSTAT definitions are closer to the U.S. definitions than they were in prior years. The impact of this revision was to lower the unemployment rate by 0.1 percentage point in 1992 and 1993, by 0.4 percentage point in 1994, and 0.5 percentage point in 1995.

For Italy, the 1991 break reflects a revision in the method of weighting sample data. The impact was to increase the unemployment rate by approximately 0.3 percentage point, from 6.6 to 6.9 percent in 1991.

In October 1992, the survey methodology was revised and the definition of unemployment was changed to include only those who were actively looking for a job within the 30 days preceding the survey and who were available for work. In addition, the lower age limit for the labor force was raised from 14 to 15 years. (Prior to these changes, BLS adjusted Italy's published unemployment rate downward by excluding from the unemployed those persons who had not actively sought work in the past 30 days.) The break in the series also reflects the incorporation of the 1991 population census results. The impact of these changes was to raise Italy's adjusted unemployment rate by approximately 1.2 percentage points, from 8.3 to 9.5 percent in fourth-quarter 1992. These changes did not affect employment significantly, except in 1993. Estimates by the Italian Statistical Office indicate that employment declined by about 3 percent in 1993, rather than the nearly 4 percent indicated by the data shown in table 44. This difference is attributable mainly to the incorporation of the 1991 population benchmarks in the 1993 data. Data for earlier years have not been adjusted to incorporate the 1991 census results.

For the Netherlands, a new survey questionnaire was introduced in 1992 that allowed for a closer application of ILO guidelines. EUROSTAT has revised the Dutch series back to 1988 based on the 1992 changes. The 1988 revised unemployment rate is 7.6 percent; the previous estimate for the same year was 9.3 percent.

There have been two breaks in series in the Swedish labor force survey, in 1987 and 1993. Adjustments have been made for the 1993 break back to 1987. In 1987, a new questionnaire was introduced. Questions regarding current availability were added and the period of active workseeking was reduced from 60 days to 4 weeks. These changes lowered Sweden's 1987 unemployment rate by 0.4 percentage point, from 2.3 to 1.9 percent. In 1993, the measurement period for the labor force survey was changed to represent all 52 weeks of the year rather than one week each month and a new adjustment for population totals was introduced. The impact was to raise the unemployment rate by approximately 0.5 percentage point, from 7.6 to 8.1 percent. Statistics Sweden revised its labor force survey data for 1987–92 to take into account the break in 1993. The adjustment raised the Swedish unemployment rate by 0.2 percentage point in 1987 and gradually rose to 0.5 percentage point in 1992.

Beginning with 1987, BLS has adjusted the Swedish data to classify students who also sought work as unemployed. The impact of this change was to increase the adjusted unemployment rate by 0.1 percentage point in 1987 and by 1.8 percentage points in 1994, when unemployment was higher. In 1998, the adjusted unemployment rate had risen from 6.5 to 8.4 percent due to the adjustment to include students.

The net effect of the 1987 and 1993 changes and the BLS adjustment for students seeking work lowered Sweden's 1987 unemployment rate from 2.3 to 2.2 percent.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 691–5654.

## Manufacturing productivity and labor costs

### Description of the series

Table 45 presents comparative indexes of manufacturing labor productivity (output per hour), output, total hours, compensation per hour, and unit labor costs for the United States, Canada, Japan, and nine European countries. These measures are trend comparisons—that is, series that measure changes over time—rather than level comparisons. There are greater technical problems in comparing the levels of manufacturing output among countries.

BLS constructs the comparative indexes from three basic aggregate measures—output, total labor hours, and total compensation. The hours and compensation measures refer to all employed persons (wage and salary earners plus self-employed persons and unpaid family workers) in the United States, Canada, Japan, France, Germany, Norway, and Sweden, and to all employees (wage and salary earners) in the other countries.

### Definitions

**Output**, in general, refers to value added in manufacturing from the national accounts of each country. However, the output series for Japan prior to 1970 is an index of industrial production, and the national accounts measures for the United Kingdom are essentially identical to their indexes of industrial production.

The 1977–97 output data for the United States are the gross product originating (value added) measures prepared by the Bureau of Economic Analysis of the U.S. Department of Commerce. Comparable manufacturing output data currently are not available prior to 1977.

U.S. gross product originating is a chain-type annual-weighted series. (For more information on the U.S. measure, see Robert E. Yuskavage, "Improved Estimates of Gross Product by Industry, 1959–94," *Survey of Current Business*, August 1996, pp. 133–55.) The Japanese value added series is based upon one set of fixed price weights for the years 1970 through 1997. Output series for the other foreign economies also employ fixed price weights, but the weights are updated periodically (for example, every 5 or 10 years).

To preserve the comparability of the U.S. measures with those for other economies, BLS uses gross product originating in manufacturing for the United States for these comparative measures. The gross product originating series differs from the manufacturing output series that BLS publishes in its news releases on quarterly measures of U.S. productivity and costs (and that underlies the measures that appear in tables 39 and 41 in this section). The quarterly measures are on a "sectoral output" basis, rather than a value-added basis. Sectoral output is gross output less intrasector transactions.

**Total labor hours** refers to hours worked in all countries. The measures are developed from statistics of manufacturing employment and average hours. The series used for France (from 1970 forward), Norway, and Sweden are official series published with the national accounts. Where official total hours series are not available, the measures are developed by BLS using employment figures published with the national accounts, or other comprehensive employment series, and estimates of annual hours worked. For Germany, BLS uses estimates of average hours worked developed by a research institute connected to the Ministry of Labor for use with the national accounts employment figures. For the other countries, BLS constructs its own estimates of average hours.

Denmark has not published estimates of

average hours for 1994–97; therefore, the BLS measure of labor input for Denmark ends in 1993.

**Total compensation (labor cost)** includes all payments in cash or in-kind made directly to employees plus employer expenditures for legally required insurance programs and contractual and private benefit plans. The measures are from the national accounts of each country, except those for Belgium, which are developed by BLS using statistics on employment, average hours, and hourly compensation. For Canada, France, and Sweden, compensation is increased to account for other significant taxes on payroll or employment. For the United Kingdom, compensation is reduced between 1967 and 1991 to account for employment-related subsidies. Self-employed workers are included in the all-employed-persons measures by assuming that their hourly compensation is equal to the average for wage and salary employees.

### Notes on the data

In general, the measures relate to total manufacturing as defined by the International Standard Industrial Classification. However, the measures for France (for all years) and Italy (beginning 1970) refer to mining and manufacturing less energy-related products, and the measures for Denmark include mining and exclude manufacturing handicrafts from 1960 to 1966.

The measures for recent years may be based on current indicators of manufacturing output (such as industrial production indexes), employment, average hours, and hourly compensation until national accounts and other statistics used for the long-term measures become available.

FOR ADDITIONAL INFORMATION on this series, contact the Division of Foreign Labor Statistics: (202) 691–5654.

## Occupational Injury and Illness Data

(Tables 46–47)

### Survey of Occupational Injuries and Illnesses

### Description of the series

The Survey of Occupational Injuries and Illnesses collects data from employers about their workers' job-related nonfatal injuries and illnesses. The information that employers provide is based on records that they maintain under the Occupational Safety and Health Act of 1970. Self-employed individuals, farms with fewer than 11 employees, employers regulated by other Federal safety and health laws, and Federal, State, and local government agencies are excluded from the survey.

The survey is a Federal-State cooperative program with an independent sample selected for each participating State. A stratified random sample with a Neyman allocation is selected to represent all private industries in the State. The survey is stratified by Standard Industrial Classification and size of employment.

### Definitions

Under the Occupational Safety and Health Act, employers maintain records of nonfatal work-related injuries and illnesses that involve one or more of the following: loss of consciousness, restriction of work or motion, transfer to another job, or medical treatment other than first aid.

**Occupational injury** is any injury such as a cut, fracture, sprain, or amputation that results from a work-related event or a single, instantaneous exposure in the work environment.

**Occupational illness** is an abnormal condition or disorder, other than one resulting from an occupational injury, caused by exposure to factors associated with employment. It includes acute and chronic illnesses or disease which may be caused by inhalation, absorption, ingestion, or direct contact.

**Lost workday injuries and illnesses** are cases that involve days away from work, or days of restricted work activity, or both.

**Lost workdays** include the number of workdays (consecutive or not) on which the employee was either away from work or at work in some restricted capacity, or both, because of an occupational injury or illness. BLS measures of the number and incidence rate of lost workdays were discontinued beginning with the 1993 survey. The number of days away from work or days of restricted work activity does not include the day of injury or onset of illness or any days on which the employee would not have worked, such as a Federal holiday, even though able to work.

**Incidence rates** are computed as the number of injuries and/or illnesses or lost work days per 100 full-time workers.

### Notes on the data

The definitions of occupational injuries and illnesses are from *Recordkeeping Guidelines for Occupational Injuries and Illnesses* (U.S. Department of Labor, Bureau of Labor Statistics, September 1986).

Estimates are made for industries and employment size classes for total recordable cases, lost workday cases, days away from work cases, and nonfatal cases without lost workdays. These data also are shown separately for injuries. Illness data are available for seven categories: occupational skin diseases or disorders, dust diseases of the lungs, respiratory conditions due to toxic agents, poisoning (systemic effects of toxic agents), disorders due to physical agents (other than toxic materials), disorders associated with repeated trauma, and all other occupational illnesses.

The survey continues to measure the number of new work-related illness cases which are recognized, diagnosed, and reported during the year. Some conditions, for example, long-term latent illnesses caused by exposure to carcinogens, often are difficult to relate to the workplace and are not adequately recognized and reported. These long-term latent illnesses are believed to be understated in the survey's illness measure. In contrast, the overwhelming majority of the reported new illnesses are those which are easier to directly relate to workplace activity (for example, contact dermatitis and carpal tunnel syndrome).

Most of the estimates are in the form of incidence rates, defined as the number of injuries and illnesses per 100 equivalent full-time workers. For this purpose, 200,000 employee hours represent 100 employee years (2,000 hours per employee). Full detail on the available measures is presented in the annual bulletin, *Occupational Injuries and Illnesses: Counts, Rates, and Characteristics.*

Comparable data for more than 40 States and territories are available from the BLS Office of Safety, Health and Working Conditions. Many of these States publish data on State and local government employees in addition to private industry data.

Mining and railroad data are furnished to BLS by the Mine Safety and Health Administration and the Federal Railroad Administration. Data from these organizations are included in both the national and State data published annually.

With the 1992 survey, BLS began publishing details on serious, nonfatal incidents resulting in days away from work. Included are some major characteristics of the injured and ill workers, such as occupation, age, gender, race, and length of service, as well as the circumstances of their injuries and illnesses (nature of the disabling condition, part of body affected, event and exposure, and the source directly producing the condition). In general, these data are available nationwide for detailed industries and for individual States at more aggregated industry levels.

FOR ADDITIONAL INFORMATION on occupational injuries and illnesses, contact the Office of Occupational Safety, Health and Working Conditions at (202) 691–6180, or access the Internet at:

**http://www.bls.gov/oshhome.htm**

## Census of Fatal Occupational Injuries

The Census of Fatal Occupational Injuries compiles a complete roster of fatal job-related injuries, including detailed data about the fatally injured workers and the fatal events. The program collects and cross checks fatality information from multiple sources, including death certificates, State and Federal workers' compensation reports, Occupational Safety and Health Administration and Mine Safety and Health Administration records, medical examiner and autopsy reports, media accounts, State motor vehicle fatality records, and follow-up questionnaires to employers.

In addition to private wage and salary workers, the self-employed, family members, and Federal, State, and local government workers are covered by the program. To be included in the fatality census, the decedent must have been employed (that is working for pay, compensation, or profit) at the time of the event, engaged in a legal work activity, or present at the site of the incident as a requirement of his or her job.

### Definition

**A fatal work injury** is any intentional or unintentional wound or damage to the body resulting in death from acute exposure to energy, such as heat or electricity, or kinetic energy from a crash, or from the absence of such essentials as heat or oxygen caused by a specific event or incident or series of events within a single workday or shift. Fatalities that occur during a person's commute to or from work are excluded from the census, as well as work-related illnesses, which can be difficult to identify due to long latency periods.

### Notes on the data

Twenty-eight data elements are collected, coded, and tabulated in the fatality program, including information about the fatally injured worker, the fatal incident, and the machinery or equipment involved. Summary worker demographic data and event characteristics are included in a national news release that is available about 8 months after the end of the reference year. The Census of Fatal Occupational Injuries was initiated in 1992 as a joint Federal-State effort. Most States issue summary information at the time of the national news release.

FOR ADDITIONAL INFORMATION on the Census of Fatal Occupational Injuries contact the BLS Office of Safety, Health, and Working Conditions at (202) 691–6175, or the Internet at:

**http://www.bls.gov/oshhome.htm**

## Bureau of Labor Statistics Internet

The Bureau of Labor Statistics World Wide Web site on the Internet contains a range of data on consumer and producer prices, employment and unemployment, occupational compensation, employee benefits, workplace injuries and illnesses, and productivity. The homepage can be accessed using any Web browser:

**http://stats.bls.gov**

Also, some data can be accessed through anonymous FTP or Gopher at

**stats.bls.gov**

## 1. Labor market indicators

| Selected indicators | 1999 | 2000 | 1999 | | | | 2000 | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | I | II | III | IV | I | II | III | IV |
| **Employment data** | | | | | | | | | | |
| Employment status of the civilian noninstitutionalized population (household survey):[1] | | | | | | | | | | |
| Labor force participation rate | 67.1 | 67.2 | 67.1 | 67.1 | 67.1 | 67.1 | 67.4 | 67.3 | 67.0 | 67.1 |
| Employment-population ratio | 64.3 | 64.5 | 64.3 | 64.2 | 64.2 | 64.3 | 64.6 | 64.6 | 64.3 | 64.4 |
| Unemployment rate | 4.2 | 4.0 | 4.3 | 4.3 | 4.2 | 4.1 | 4.1 | 4.0 | 4.0 | 4.0 |
| Men | 4.1 | 3.9 | 4.1 | 4.2 | 4.1 | 4.0 | 3.9 | 3.9 | 3.9 | 4.0 |
| 16 to 24 years | 10.3 | 9.7 | 10.3 | 10.5 | 10.1 | 10.3 | 9.7 | 9.8 | 9.8 | 9.6 |
| 25 years and over | 3.0 | 2.8 | 3.0 | 3.0 | 3.0 | 2.9 | 2.8 | 2.8 | 2.8 | 2.9 |
| Women | 4.3 | 4.1 | 4.4 | 4.4 | 4.3 | 4.2 | 4.2 | 4.1 | 4.2 | 4.0 |
| 16 to 24 years | 9.5 | 8.9 | 9.7 | 9.0 | 9.6 | 9.4 | 9.5 | 9.0 | 8.6 | 8.6 |
| 25 years and over | 3.3 | 3.2 | 3.4 | 3.5 | 3.3 | 3.1 | 3.2 | 3.2 | 3.3 | 3.0 |
| Employment, nonfarm (payroll data), in thousands:[1] | | | | | | | | | | |
| Total | 128,786 | 131,417 | 127,800 | 128,430 | 129,073 | 129,783 | 130,626 | 131,552 | 131,619 | 131,831 |
| Private sector | 108,616 | 110,847 | 107,741 | 108,319 | 108,874 | 109,507 | 110,195 | 110,725 | 111,084 | 109,507 |
| Goods-producing | 25,482 | 25,661 | 25,488 | 25,454 | 25,459 | 25,524 | 25,680 | 25,703 | 25,680 | 25,620 |
| Manufacturing | 18,543 | 18,437 | 18,632 | 18,543 | 18,516 | 18,482 | 18,481 | 18,488 | 18,453 | 18,347 |
| Service-producing | 103,304 | 105,756 | 102,312 | 102,976 | 103,614 | 104,259 | 104,946 | 105,849 | 105,940 | 106,211 |
| Average hours: | | | | | | | | | | |
| Private sector | 34.5 | 34.5 | 34.5 | 34.5 | 34.5 | 34.5 | 34.5 | 34.5 | 34.4 | 34.3 |
| Manufacturing | 41.7 | 41.5 | 41.6 | 41.7 | 41.8 | 41.7 | 41.7 | 41.7 | 41.5 | 41.0 |
| Overtime | 4.6 | 4.5 | 4.5 | 4.6 | 4.6 | 4.7 | 4.6 | 4.7 | 4.5 | 4.3 |
| **Employment Cost Index[2]** | | | | | | | | | | |
| Percent change in the ECI, compensation: | | | | | | | | | | |
| All workers (excluding farm, household and Federal workers) | 3.4 | 4.1 | .4 | 1.0 | 1.1 | .9 | 1.3 | 1.0 | 1.0 | .7 |
| Private industry workers | 3.4 | 4.4 | .4 | 1.1 | .9 | .9 | 1.5 | 1.2 | .9 | .7 |
| Goods-producing[3] | 3.4 | 4.4 | .8 | .7 | .9 | 1.0 | 1.6 | 1.2 | .9 | .9 |
| Service-producing[3] | 3.4 | 4.4 | .3 | 1.3 | .9 | .8 | 1.4 | 1.2 | 1.0 | .7 |
| State and local government workers | 3.4 | 3.0 | .5 | .4 | 1.5 | 1.0 | .6 | .3 | 1.3 | .7 |
| Workers by bargaining status (private industry): | | | | | | | | | | |
| Union | 2.7 | 4.0 | .4 | .7 | .9 | .7 | 1.3 | 1.0 | 1.2 | .5 |
| Nonunion | 3.6 | 4.4 | .5 | 1.2 | .9 | 1.0 | 1.5 | 1.2 | 1.0 | .7 |

[1] Quarterly data seasonally adjusted.

[2] Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter.

[3] Goods-producing industries include mining, construction, and manufacturing. Service-producing industries include all other private sector industries.

## 2. Annual and quarterly percent changes in compensation, prices, and productivity

| Selected measures | 1999 | 2000 | 1988 | 1999 | | | | 2000 | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | IV | I | II | III | IV | I | II | III | IV |
| **Compensation data[1,2]** | | | | | | | | | | | |
| Employment Cost Index—compensation (wages, salaries, benefits): | | | | | | | | | | | |
| Civilian nonfarm | 3.4 | 1.2 | 0.6 | 0.4 | 1.0 | 1.1 | 0.9 | 1.3 | 1.0 | 1.0 | 0.7 |
| Private nonfarm | 3.4 | 1.3 | .6 | .4 | 1.1 | .9 | .9 | 1.5 | 1.2 | .9 | .7 |
| Employment Cost Index—wages and salaries: | | | | | | | | | | | |
| Civilian nonfarm | 3.5 | 1.0 | .7 | .5 | 1.0 | 1.1 | .8 | 1.1 | 1.0 | 1.1 | .6 |
| Private nonfarm | 3.5 | 1,1 | .6 | .5 | 1.2 | .9 | .9 | 1.2 | 1.0 | 1.0 | .6 |
| **Price data[1]** | | | | | | | | | | | |
| Consumer Price Index (All Urban Consumers): All Items | 2.7 | 1.0 | .2 | .7 | .7 | 1.0 | .2 | 1.0 | 1.0 | 1.0 | 1.0 |
| Producer Price Index: | | | | | | | | | | | |
| Finished goods | 2.9 | 1.0 | .4 | .0 | 1.1 | 1.0 | 1.0 | .9 | 1.0 | 1.0 | 1.0 |
| Finished consumer goods | 3.8 | 1.0 | .2 | .0 | 1.8 | 2.2 | –.2 | 1.0 | 1.0 | 1.0 | 1.0 |
| Capital equipment | .3 | 1.0 | .9 | –.1 | –.4 | –.4 | 1.2 | 1.0 | 1.0 | 1.0 | 1.0 |
| Intermediate materials, supplies, and components | 3.7 | 1.0 | –1.6 | –.2 | 1.9 | 1.9 | .1 | 1.0 | 1.0 | 1.0 | 1.0 |
| Crude materials | 15.3 | 1.3 | –2.5 | –.1 | 9.4 | 10.2 | –3.5 | 1.0 | 1.1 | 1.0 | 1.0 |
| **Productivity data[3]** | | | | | | | | | | | |
| Output per hour of all persons: | | | | | | | | | | | |
| Business sector | 3.1 | –.1 | 3.9 | 2.7 | .5 | 4.7 | 7.6 | 1.7 | 7.0 | 2.4 | 3.2 |
| Nonfarm business sector | 2.9 | –.1 | 3.6 | 2.0 | .2 | 5.0 | 8.0 | 2.1 | 6.3 | 3.0 | 2.4 |
| Nonfinancial corporations[4] | 4.0 | – | 3.4 | 3.0 | 2.7 | 4.4 | 5.8 | 3.1 | 5.6 | 4.4 | – |

[1] Annual changes are December-to-December changes. Quarterly changes are calculated using the last month of each quarter. Compensation and price data are not seasonally adjusted, and the price data are not compounded.

[2] Excludes Federal and private household workers.

[3] Annual rates of change are computed by comparing annual averages. Quarterly percent changes reflect annual rates of change in quarterly indexes. The data are seasonally adjusted.

[4] Output per hour of all employees.

## 3. Alternative measures of wage and compensation changes

| Components | Quarterly average | | | | | | Four quarters ending— | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | | 2000 | | | | 1999 | | 2000 | | | |
| | III | IV | I | II | III | IV | III | IV | I | II | III | IV |
| Average hourly compensation:[1] | | | | | | | | | | | | |
| All persons, business sector | 5.1 | 3.8 | 3.7 | 7.1 | 5.7 | 7.5 | 4.6 | 4.5 | 4.3 | 4.9 | 5.0 | 6.0 |
| All persons, nonfarm business sector | 5.2 | 4.2 | 4.1 | 6.0 | 6.2 | 6.6 | 4.4 | 4.4 | 4.5 | 4.9 | 5.1 | 5.7 |
| Employment Cost Index—compensation: | | | | | | | | | | | | |
| Civilian nonfarm[2] | 1.1 | .9 | 1.3 | 1.0 | 1.0 | .7 | 3.1 | 3.4 | 4.3 | 4.4 | 4.3 | 4.1 |
| Private nonfarm | .9 | .9 | 1.5 | 1.2 | .9 | .7 | 3.1 | 3.4 | 4.6 | 4.6 | 4.6 | 4.4 |
| Union | .9 | .7 | 1.3 | 1.0 | 1.2 | .1 | 2.5 | 2.7 | 3.6 | 3.9 | 4.2 | 4.0 |
| Nonunion | .9 | 1.0 | 1.5 | 1.2 | 1.0 | .7 | 3.2 | 3.6 | 4.7 | 4.6 | 4.7 | 4.4 |
| State and local governments | 1.5 | 1.0 | .6 | .3 | 1.3 | .7 | 2.9 | 3.4 | 3.6 | 3.5 | 3.3 | 3.0 |
| Employment Cost Index—wages and salaries: | | | | | | | | | | | | |
| Civilian nonfarm[2] | 1.1 | .8 | 1.1 | 1.0 | 1.1 | .6 | 3.3 | 3.5 | 4.0 | 4.0 | 4.0 | 3.8 |
| Private nonfarm | .9 | .9 | 1.2 | 1.0 | 1.0 | 1.0 | 3.2 | 3.5 | 4.2 | 4.1 | 4.1 | 3.9 |
| Union | .7 | .6 | .5 | .9 | 1.1 | .9 | 2.5 | 2.6 | 2.7 | 2.8 | 3.2 | 3.4 |
| Nonunion | .9 | .9 | 1.3 | 1.1 | 1.0 | .6 | 3.3 | 3.6 | 4.4 | 4.3 | 4.3 | 4.0 |
| State and local governments | 1.9 | .9 | .6 | .3 | 1.7 | .7 | 3.3 | 3.6 | 3.8 | 3.7 | 3.5 | 3.3 |

[1] Seasonally adjusted. "Quarterly average" is percent change from a quarter ago, at an annual rate.

[2] Excludes Federal and household workers.

## 4. Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

| Employment status | Annual average | | 1999 | 2000 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
| **TOTAL** | | | | | | | | | | | | | | | |
| Civilian noninstitutional population[1] | 207,753 | 209,699 | 208,832 | 208,782 | 208,907 | 209,053 | 209,216 | 209,371 | 209,543 | 209,727 | 209,935 | 210,161 | 210,378 | 210,577 | 210,743 |
| Civilian labor force | 139,368 | 140,863 | 140,185 | 140,645 | 141,860 | 140,705 | 141,114 | 140,573 | 140,757 | 140,546 | 140,724 | 140,847 | 141,000 | 141,136 | 141,489 |
| Participation rate | 67.1 | 67.2 | 67.1 | 67.4 | 67.4 | 67.3 | 67.4 | 67.1 | 67.2 | 67.0 | 67.0 | 67.0 | 67.0 | 67.0 | 67.1 |
| Employed | 133,488 | 135,208 | 134,498 | 134,976 | 135,120 | 135,013 | 135,517 | 134,843 | 135,183 | 134,898 | 134,939 | 135,310 | 135,464 | 135,478 | 135,836 |
| Employment-population ratio[2] | 64.3 | 64.5 | 64.4 | 64.6 | 64.7 | 64.6 | 64.8 | 64.4 | 64.5 | 64.3 | 64.3 | 64.4 | 64.4 | 64.3 | 64.5 |
| Unemployed | 5,880 | 5,655 | 5,687 | 5,669 | 5,740 | 5,692 | 5,597 | 5,730 | 5,574 | 5,648 | 5,785 | 5,537 | 5,536 | 5,658 | 5,653 |
| Unemployment rate | 4.2 | 4.0 | 4.1 | 4.0 | 4.1 | 4.0 | 4.0 | 4.1 | 4.0 | 4.0 | 4.1 | 3.9 | 3.9 | 4.0 | 4.0 |
| Not in the labor force | 68,385 | 68,836 | 68,647 | 68,137 | 68,047 | 68,348 | 68,102 | 68,798 | 68,786 | 69,181 | 69,211 | 69,314 | 69,378 | 69,441 | 69,254 |
| **Men, 20 years and over** | | | | | | | | | | | | | | | |
| Civilian noninstitutional population[1] | 91,555 | 92,580 | 92,052 | 92,057 | 92,092 | 92,145 | 92,303 | 92,408 | 92,546 | 92,642 | 92,754 | 92,863 | 92,969 | 93,061 | 93,117 |
| Civilian labor force | 79,104 | 70,930 | 70,572 | 70,777 | 70,952 | 70,773 | 70,776 | 70,666 | 70,785 | 70,782 | 71,029 | 71,053 | 71,155 | 71,135 | 71,289 |
| Participation rate | 76.7 | 76.6 | 76.7 | 76.9 | 77.0 | 76.8 | 76.7 | 76.5 | 76.5 | 76.4 | 76.6 | 76.5 | 76.5 | 76.4 | 76.6 |
| Employed | 67,761 | 68,580 | 68,235 | 68,440 | 68,557 | 68,445 | 68,473 | 68,315 | 68,489 | 68,495 | 68,710 | 68,728 | 68,774 | 68,683 | 68,848 |
| Employment-population ratio[2] | 74.0 | 74.1 | 74.1 | 74.3 | 74.5 | 74.3 | 74.2 | 73.9 | 74.0 | 73.9 | 74.1 | 74.0 | 74.0 | 73.8 | 73.9 |
| Agriculture | 2,028 | 2,252 | 2,246 | 2,285 | 2,283 | 2,240 | 2,248 | 2,228 | 2,262 | 2,280 | 2,276 | 2,350 | 2,219 | 2,122 | 2,232 |
| Nonagricultural industries | 65,517 | 66,328 | 65,989 | 66,155 | 66,294 | 66,205 | 66,225 | 66,087 | 66,227 | 66,215 | 66,434 | 66,378 | 66,555 | 66,561 | 66,616 |
| Unemployed | 2,433 | 2,350 | 2,337 | 2,337 | 2,375 | 2,328 | 2,303 | 2,347 | 2,296 | 2,287 | 2,319 | 2,325 | 2,381 | 2,452 | 2,441 |
| Unemployment rate | 3.5 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.2 | 3.2 | 3.3 | 3.3 | 3.3 | 3.4 | 3.4 |
| **Women, 20 years and over** | | | | | | | | | | | | | | | |
| Civilian noninstitutional population[1] | 100,158 | 101,078 | 100,666 | 100,579 | 100,666 | 100,713 | 100,809 | 100,929 | 101,007 | 101,111 | 101,209 | 101,321 | 101,448 | 101,533 | 101,612 |
| Civilian labor force | 60,840 | 61,565 | 61,204 | 61,462 | 61,488 | 61,573 | 61,856 | 61,582 | 61,561 | 61,535 | 61,265 | 61,486 | 61,528 | 61,625 | 61,819 |
| Participation rate | 60.7 | 60.9 | 60.8 | 61.1 | 61.1 | 61.1 | 61.4 | 61.0 | 60.9 | 60.9 | 60.5 | 60.7 | 60.6 | 60.7 | 60.8 |
| Employed | 58,555 | 59,352 | 58,981 | 59,209 | 59,285 | 59,326 | 59,651 | 59,264 | 59,282 | 59,273 | 58,992 | 59,344 | 59,425 | 59,506 | 59,708 |
| Employment-population ratio[2] | 58.5 | 58.7 | 58.6 | 58.9 | 58.9 | 58.9 | 59.2 | 58.7 | 58.7 | 58.6 | 58.3 | 58.6 | 58.6 | 58.6 | 58.8 |
| Agriculture | 803 | 818 | 802 | 826 | 854 | 866 | 871 | 846 | 829 | 797 | 808 | 764 | 748 | 797 | 822 |
| Nonagricultural industries | 57,752 | 58,535 | 58,179 | 58,383 | 58,431 | 58,460 | 58,780 | 58,418 | 58,453 | 58,476 | 58,184 | 58,580 | 58,677 | 58,709 | 58,886 |
| Unemployed | 2,285 | 2,212 | 2,223 | 2,253 | 2,203 | 2,247 | 2,205 | 2,318 | 2,279 | 2,262 | 2,273 | 2,142 | 2,103 | 2,119 | 2,111 |
| Unemployment rate | 3.8 | 3.6 | 3.6 | 3.7 | 3.6 | 3.6 | 3.6 | 3.8 | 3.7 | 3.7 | 3.7 | 3.5 | 3.4 | 3.4 | 3.4 |
| **Both sexes, 16 to 19 years** | | | | | | | | | | | | | | | |
| Civilian noninstitutional population[1] | 16,040 | 16,042 | 16,114 | 16,147 | 16,149 | 16,196 | 16,104 | 16,034 | 15,991 | 15,974 | 15,972 | 15,977 | 15,960 | 15,983 | 16,014 |
| Civilian labor force | 8,333 | 8,369 | 8,409 | 8,406 | 8,420 | 8,359 | 8,482 | 8,329 | 8,411 | 8,229 | 8,430 | 8,308 | 8,317 | 8,376 | 8,381 |
| Participation rate | 52.0 | 52.2 | 52.2 | 52.1 | 52.1 | 51.6 | 52.7 | 51.9 | 52.6 | 51.5 | 52.8 | 52.0 | 52.1 | 52.4 | 52.3 |
| Employed | 7,172 | 7,216 | 7,282 | 7,327 | 7,258 | 7,242 | 7,393 | 7,264 | 7,412 | 7,130 | 7,237 | 7,238 | 7,265 | 7,289 | 7,280 |
| Employment-population ratio[2] | 44.7 | 45.4 | 45.2 | 45.4 | 44.9 | 44.7 | 45.9 | 45.3 | 46.4 | 44.6 | 45.3 | 45.3 | 45.5 | 45.6 | 45.5 |
| Agriculture | 234 | 235 | 277 | 245 | 230 | 232 | 241 | 220 | 222 | 218 | 233 | 242 | 274 | 257 | 220 |
| Nonagricultural industries | 6,938 | 7,041 | 7,005 | 7,082 | 7,028 | 7,010 | 7,152 | 7,044 | 7,190 | 6,912 | 7,004 | 6,996 | 6,991 | 7,032 | 7,060 |
| Unemployed | 1,162 | 1,093 | 1,127 | 1,079 | 1,162 | 1,117 | 1,089 | 1,065 | 999 | 1,099 | 1,193 | 1,070 | 1,052 | 1,087 | 1,101 |
| Unemployment rate | 13.9 | 13.1 | 13.4 | 12.8 | 13.8 | 13.4 | 12.8 | 12.8 | 11.9 | 13.4 | 14.2 | 12.9 | 12.6 | 13.0 | 13.1 |
| **White** | | | | | | | | | | | | | | | |
| Civilian noninstitutional population[1] | 173,085 | 174,428 | 173,821 | 173,812 | 173,886 | 173,983 | 174,092 | 174,197 | 174,316 | 174,443 | 174,587 | 174,745 | 174,899 | 175,034 | 175,145 |
| Civilian labor force | 116,509 | 117,574 | 117,073 | 117,484 | 117,661 | 117,592 | 117,800 | 117,329 | 117,477 | 117,298 | 117,554 | 117,553 | 117,603 | 117,640 | 117,945 |
| Participation rate | 67.3 | 67.4 | 67.4 | 67.6 | 67.7 | 67.6 | 67.7 | 67.4 | 67.4 | 67.2 | 67.3 | 67.3 | 67.2 | 67.2 | 67.3 |
| Employed | 112,235 | 113,475 | 113,005 | 113,442 | 113,501 | 113,435 | 113,710 | 113,240 | 113,493 | 113,201 | 113,378 | 113,464 | 113,584 | 113,509 | 113,811 |
| Employment-population ratio[2] | 64.8 | 65.1 | 65.0 | 65.3 | 65.3 | 65.2 | 65.3 | 65.0 | 65.1 | 64.9 | 64.9 | 64.9 | 64.9 | 64.8 | 65.0 |
| Unemployed | 4,273 | 4,099 | 4,068 | 4,042 | 4,160 | 4,157 | 4,090 | 4,089 | 3,984 | 4,097 | 4,176 | 4,089 | 4,019 | 4,131 | 4,134 |
| Unemployment rate | 3.7 | 3.5 | 3.5 | 3.4 | 3.5 | 3.5 | 3.5 | 3.5 | 3.4 | 3.5 | 3.6 | 3.5 | 3.4 | 3.5 | 3.5 |
| **Black** | | | | | | | | | | | | | | | |
| Civilian noninstitutional population[1] | 24,855 | 25,218 | 25,051 | 25,047 | 25,076 | 25,105 | 25,135 | 25,161 | 25,191 | 25,221 | 25,258 | 25,299 | 25,339 | 25,376 | 25,408 |
| Civilian labor force | 16,365 | 16,603 | 16,492 | 16,587 | 16,721 | 16,550 | 16,586 | 16,577 | 16,573 | 16,501 | 16,540 | 16,489 | 16,627 | 16,732 | 16,742 |
| Participation rate | 65.8 | 65.8 | 65.8 | 66.2 | 66.7 | 65.9 | 66.0 | 65.9 | 65.8 | 65.4 | 65.5 | 65.2 | 65.6 | 65.9 | 65.9 |
| Employed | 15,056 | 15,334 | 15,188 | 15,238 | 15,416 | 15,312 | 15,376 | 15,264 | 15,277 | 15,232 | 15,239 | 15,304 | 15,401 | 15,485 | 15,470 |
| Employment-population ratio[2] | 60.6 | 60.8 | 60.6 | 60.8 | 61.5 | 61.0 | 61.2 | 60.7 | 60.6 | 60.4 | 60.3 | 60.5 | 60.8 | 61.0 | 60.9 |
| Unemployed | 1,309 | 1,269 | 1,304 | 1,349 | 1,305 | 1,238 | 1,210 | 1,313 | 1,296 | 1,269 | 1,301 | 1,185 | 1,226 | 1,247 | 1,272 |
| Unemployment rate | 8.0 | 7.6 | 7.9 | 8.1 | 7.8 | 7.5 | 7.3 | 7.9 | 7.8 | 7.7 | 7.9 | 7.2 | 7.4 | 7.5 | 7.6 |

See footnotes at end of table.

## 4. Continued—Employment status of the population, by sex, age, race, and Hispanic origin, monthly data seasonally adjusted

[Numbers in thousands]

| Employment status | Annual average | | 1998 | 1999 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
| **Hispanic origin** | | | | | | | | | | | | | | | |
| Civilian noninstitutional population[1] | 21,650 | 22,393 | 22,008 | 22,047 | 22,108 | 22,166 | 22,231 | 22,292 | 22,355 | 22,422 | 22,488 | 22,555 | 22,618 | 22,687 | 22,749 |
| Civilian labor force | 14,665 | 15,368 | 15,001 | 15,181 | 15,194 | 15,271 | 15,327 | 15,294 | 15,320 | 15,243 | 15,312 | 15,513 | 15,491 | 15,626 | 15,671 |
| Participation rate | 67.7 | 68.6 | 68.2 | 68.9 | 68.7 | 68.9 | 68.9 | 68.6 | 68.5 | 68.0 | 68.1 | 68.8 | 68.5 | 68.9 | 68.9 |
| Employed | 13,720 | 14,492 | 14,128 | 14,309 | 14,322 | 14,340 | 14,463 | 14,411 | 14,456 | 14,384 | 14,439 | 14,647 | 14,711 | 14,686 | 14,772 |
| Employment-population ratio[2] | 63.4 | 64.7 | 64.2 | 64.9 | 64.8 | 64.7 | 65.1 | 64.6 | 64.7 | 64.2 | 64.2 | 64.9 | 65.0 | 64.7 | 64.9 |
| Unemployed | 945 | 876 | 873 | 872 | 872 | 931 | 864 | 883 | 864 | 859 | 873 | 866 | 780 | 940 | 899 |
| Unemployment rate | 6.4 | 5.7 | 5.8 | 5.7 | 5.7 | 6.1 | 5.6 | 5.8 | 5.6 | 5.6 | 5.7 | 5.6 | 5.0 | 6.0 | 5.7 |

[1] The population figures are not seasonally adjusted.

[2] Civilian employment as a percent of the civilian noninstitutional population.

NOTE: Detail for the above race and Hispanic-origin groups will not sum to totals because data for the "other races" groups are not presented and Hispanics are included in both the white and black population groups.

## 5. Selected employment indicators, monthly data seasonally adjusted

[In thousands]

| Selected categories | Annual average | | 1999 | 2000 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
| **Characteristic** | | | | | | | | | | | | | | | |
| Employed, 16 years and over | 133,488 | 135,208 | 134,498 | 134,976 | 135,120 | 135,013 | 135,517 | 134,843 | 135,183 | 134,898 | 134,939 | 135,310 | 135,464 | 135,478 | 135,836 |
| Men | 771,446 | 72,293 | 71,991 | 72,201 | 62,333 | 72,246 | 72,257 | 72,049 | 72,240 | 72,141 | 72,379 | 72,398 | 72,427 | 72,354 | 72,534 |
| Women | 62,042 | 62,915 | 62,507 | 62,775 | 62,787 | 62,767 | 63,260 | 62,794 | 62,943 | 62,757 | 62,560 | 62,912 | 63,037 | 63,124 | 63,302 |
| Married men, spouse present | 43,254 | 43,368 | 43,324 | 3,763 | 43,437 | 43,341 | 43,321 | 43,306 | 43,364 | 43,308 | 43,375 | 43,321 | 43,345 | 43,251 | 43,293 |
| Married women, spouse present | 33,450 | 33,708 | 33,779 | 34,132 | 33,841 | 33,765 | 33,795 | 33,723 | 33,745 | 33,621 | 33,507 | 33,491 | 33,622 | 33,633 | 33,635 |
| Women who maintain families | 8,229 | 8,387 | 8,344 | 8,335 | 8,251 | 8,119 | 8,330 | 8,335 | 8,340 | 8,460 | 8,492 | 8,516 | 8,449 | 8,495 | 8,501 |
| **Class of worker** | | | | | | | | | | | | | | | |
| Agriculture: | | | | | | | | | | | | | | | |
| Wage and salary workers | 1,944 | 2,034 | 2,025 | 2,022 | 2,024 | 2,037 | 2,042 | 2,013 | 2,051 | 2,065 | 2,048 | 2,018 | 2,041 | 2,005 | 2,019 |
| Self-employed workers | 1,297 | 1,233 | 1,229 | 1,295 | 1,303 | 1,272 | 1,257 | 1,246 | 1,187 | 1,189 | 1,241 | 1,274 | 1,182 | 1,180 | 1,198 |
| Unpaid family workers | 40 | 38 | 39 | 39 | 47 | 42 | 43 | 38 | 44 | 39 | 36 | 38 | 32 | 25 | 34 |
| Nonagricultural industries: | | | | | | | | | | | | | | | |
| Wage and salary workers | 121,323 | 123,128 | 122,428 | 122,713 | 122,972 | 122,951 | 123,209 | 122,871 | 123,020 | 122,744 | 122,931 | 123,117 | 123,461 | 123,632 | 123,813 |
| Government | 18,903 | 19,053 | 18,958 | 19,011 | 19,259 | 19,451 | 19,168 | 19,084 | 18,836 | 18,592 | 18,644 | 19,003 | 19,073 | 19,146 | 19,352 |
| Private industries | 102,420 | 104,076 | 103,470 | 103,702 | 103,713 | 103,500 | 104,041 | 103,787 | 104,184 | 104,152 | 104,287 | 104,114 | 104,388 | 104,486 | 104,461 |
| Private households | 933 | 890 | 943 | 949 | 980 | 967 | 977 | 934 | 926 | 821 | 781 | 824 | 812 | 827 | 879 |
| Other | 101,487 | 103,186 | 102,527 | 102,753 | 102,733 | 102,533 | 103,064 | 102,853 | 103,258 | 103,331 | 103,506 | 103,290 | 103,576 | 103,659 | 103,582 |
| Self-employed workers | 8,790 | 8,674 | 8,643 | 8,778 | 8,780 | 8,712 | 8,727 | 8,708 | 8,660 | 8,619 | 8,618 | 8,786 | 8,561 | 8,533 | 8,600 |
| Unpaid family workers | 95 | 101 | 95 | 91 | 76 | 101 | 96 | 89 | 74 | 86 | 114 | 108 | 136 | 128 | 121 |
| **Persons at work part time[1]** | | | | | | | | | | | | | | | |
| All industries: | | | | | | | | | | | | | | | |
| Part time for economic reasons | 3,357 | 3,190 | 3,322 | 3,195 | 3,149 | 3,139 | 3,135 | 3,240 | 3,125 | 3,110 | 3,170 | 33,188 | 3,222 | 3,416 | 3,234 |
| Slack work or business conditions | 1,968 | 1,927 | 1,942 | 1,879 | 1,828 | 1,836 | 1,862 | 1,935 | 1,858 | 1,871 | 1,980 | 2,051 | 1,909 | 2,183 | 1,964 |
| Could only find part-time work | 1,079 | 944 | 1,028 | 1,014 | 1,015 | 972 | 1,002 | 972 | 981 | 918 | 880 | 831 | 947 | 886 | 896 |
| Part time for noneconomic reasons | 18,758 | 18,722 | 18,461 | 18,752 | 18,892 | 18,723 | 18,606 | 18,513 | 18,444 | 18,579 | 18,704 | 18,595 | 18,758 | 18,896 | 18,993 |
| Nonagricultural industries: | | | | | | | | | | | | | | | |
| Part time for economic reasons | 3,189 | 3,045 | 3,148 | 3,048 | 2,997 | 3,002 | 3,021 | 3,077 | 2,981 | 2,972 | 3,038 | 3,030 | 3,044 | 3,285 | 3,088 |
| Slack work or business conditions | 1,861 | 1,835 | 1,838 | 1,792 | 1,731 | 1,770 | 1,791 | 1,831 | 1,760 | 1,773 | 1,901 | 1,940 | 1,808 | 2,082 | 1,882 |
| Could only find part-time work | 1,056 | 924 | 1,010 | 988 | 994 | 942 | 975 | 952 | 982 | 896 | 861 | 817 | 923 | 871 | 877 |
| Part time for noneconomic reasons | 18,197 | 18,165 | 17,943 | 18,207 | 18,257 | 18,159 | 18,043 | 17,957 | 17,897 | 18,052 | 18,142 | 18,024 | 18,206 | 18,323 | 18,437 |

[1] Excludes persons "with a job but not at work" during the survey period for such reasons as vacation, illness, or industrial disputes.

## 6. Selected unemployment indicators, monthly data seasonally adjusted

[Unemployment rates]

| Selected categories | Annual average | | 1999 | 2000 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1998 | 2000 | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
| **Characteristic** | | | | | | | | | | | | | | | |
| Total, 16 years and over | 4.2 | 4.0 | 4.1 | 4.0 | 4.1 | 4.0 | 4.0 | 4.1 | 4.0 | 4.0 | 4.1 | 3.9 | 3.9 | 4.0 | 4.0 |
| Both sexes, 16 to 19 years | 13.9 | 13.1 | 13.4 | 12.8 | 13.8 | 13.4 | 12.8 | 12.8 | 11.9 | 13.4 | 14.2 | 12.9 | 12.6 | 13.0 | 13.1 |
| Men, 20 years and over | 3.5 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.2 | 3.2 | 3.3 | 3.3 | 3.3 | 3.4 | 3.4 |
| Women, 20 years and over | 3.8 | 3.6 | 3.6 | 3.7 | 3.6 | 3.6 | 3.6 | 3.8 | 3.7 | 3.7 | 3.7 | 3.5 | 3.4 | 3.4 | 3.4 |
| White, total | 3.7 | 3.5 | 3.5 | 3.4 | 3.5 | 3.5 | 3.5 | 3.5 | 3.4 | 3.5 | 3.6 | 3.5 | 3.4 | 11.5 | 3.5 |
| Both sexes, 16 to 19 years | 12.0 | 11.4 | 13.1 | 12.4 | 13.8 | 11.6 | 12.9 | 10.9 | 11.7 | 12.5 | 13.1 | 12.2 | 11.8 | 12.4 | 12.2 |
| Men, 16 to 19 years | 12.6 | 12.3 | 10.7 | 9.6 | 10.4 | 11.9 | 10.1 | 10.5 | 7.9 | 10.4 | 10.8 | 10.6 | 10.5 | 10.9 | 10.7 |
| Women, 16 to 19 years | 11.3 | 10.4 | 10.7 | 9.6 | 10.4 | 11.9 | 10.1 | 10.5 | 7.9 | 10.4 | 10.8 | 10.6 | 10.5 | 10.9 | 10.7 |
| Men, 20 years and over | 3.0 | 2.8 | 2.8 | 2.8 | 2.9 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.9 | 2.9 | 3.0 | 2.9 |
| Women, 20 years and over | 3.3 | 3.1 | 3.1 | 3.1 | 3.1 | 3.2 | 3.1 | 3.3 | 3.2 | 3.2 | 3.3 | 3.1 | 3.0 | 3.0 | 3.1 |
| Black, total | 8.0 | 7.6 | 7.9 | 8.1 | 7.8 | 7.5 | 7.3 | 7.9 | 7.8 | 7.7 | 7.9 | 7.2 | 7.4 | 7.5 | 7.6 |
| Both sexes, 16 to 19 years | 27.9 | 24.7 | 24.8 | 24.3 | 24.3 | 24.7 | 23.3 | 24.4 | 25.6 | 26.4 | 26.8 | 24.1 | 23.9 | 21.9 | 26.7 |
| Men, 16 to 19 years | 30.9 | 26.4 | 26.2 | 24.7 | 23.0 | 22.8 | 23.7 | 27.4 | 31.5 | 25.7 | 31.7 | 26.7 | 27.0 | 22.5 | 30.1 |
| Women, 16 to 19 years | 25.1 | 23.0 | 23.5 | 23.9 | 25.6 | 26.7 | 22.8 | 21.5 | 19.3 | 27.1 | 22.3 | 21.7 | 21.2 | 21.3 | 23.4 |
| Men, 20 years and over | 6.7 | 7.0 | 6.9 | 7.3 | 7.1 | 6.7 | 6.7 | 7.1 | 6.9 | 6.8 | 7.2 | 6.5 | 7.0 | 6.9 | 7.3 |
| Women, 20 years and over | 6.8 | 6.3 | 6.8 | 7.1 | 6.5 | 6.2 | 5.9 | 6.7 | 6.5 | 6.3 | 6.2 | 5.8 | 5.8 | 6.2 | 5.7 |
| Hispanic origin, total | 6.4 | 5.7 | 5.8 | 5.7 | 5.7 | 6.1 | 5.6 | 5.8 | 5.6 | 5.6 | 5.7 | 5.6 | 5.0 | 6.0 | 5.7 |
| Married men, spouse present | 2.2 | 2.0 | 2.2 | 2.0 | 2.0 | 2.0 | 1.8 | 1.9 | 1.9 | 2.0 | 2.0 | 2.1 | 2.1 | 2.2 | 2.2 |
| Married women, spouse present | 2.7 | 2.7 | 2.6 | 2.6 | 2.6 | 2.7 | 2.7 | 2.8 | 2.6 | 2.7 | 2.8 | 2.7 | 2.5 | 2.5 | 2.6 |
| Women who maintain families | 6.4 | 5.9 | 6.4 | 6.2 | 6.2 | 6.6 | 6.2 | 6.3 | 6.0 | 7.7 | 6.0 | 5.4 | 5.4 | 5.2 | 5.1 |
| Full-time workers | 4.1 | 3.9 | 3.9 | 3.9 | 3.9 | 3.8 | 3.8 | 3.9 | 3.8 | 3.8 | 3.9 | 3.8 | 3.8 | 3.9 | 3.9 |
| Part-time workers | 5.0 | 4.8 | 4.9 | 4.7 | 4.9 | 4.9 | 4.7 | 5.1 | 4.9 | 5.1 | 5.0 | 4.6 | 4.5 | 4.5 | 4.6 |
| **Industry** | | | | | | | | | | | | | | | |
| Nonagricultural wage and salary workers | 4.3 | 4.1 | 4.2 | 4.2 | 4.2 | 4.3 | 4.1 | 4.1 | 4.0 | 4.1 | 4.1 | 4.0 | 4.0 | 4.0 | 4.0 |
| Mining | 5.7 | 3.9 | 4.1 | 2.8 | 3.8 | 2.7 | 3.0 | 4.1 | 3.9 | 4.5 | 4.3 | 5.0 | 7.1 | 3.5 | 3.6 |
| Construction | 7.0 | 6.4 | 6.8 | 6.4 | 7.2 | 6.6 | 5.4 | 5.9 | 6.0 | 6.0 | 6.4 | 6.4 | 6.5 | 6.9 | 6.5 |
| Manufacturing | 3.6 | 3.6 | 3.5 | 3.3 | 3.4 | 3.9 | 4.0 | 3.7 | 3.4 | 3.6 | 3.5 | 3.6 | 4.0 | 3.6 | 3.6 |
| Durable goods | 3.5 | 3.4 | 3.5 | 2.9 | 3.1 | 3.2 | 3.9 | 3.6 | 3.4 | 3.3 | 3.1 | 3.2 | 3.8 | 3.5 | 3.4 |
| Nondurable goods | 3.9 | 4.0 | 3.6 | 3.8 | 3.8 | 4.9 | 4.1 | 3.8 | 3.2 | 4.0 | 4.1 | 4.3 | 4.3 | 3.9 | 4.0 |
| Transportation and public utilities | 3.0 | 3.1 | 3.0 | 3.3 | 3.2 | 3.1 | 3.0 | 3.2 | 2.9 | 3.1 | 3.1 | 3.2 | 2.8 | 2.6 | 3.2 |
| Wholesale and retail trade | 5.2 | 5.0 | 5.3 | 5.1 | 5.3 | 5.3 | 5.0 | 5.1 | 5.1 | 5.0 | 5.1 | 4.8 | 4.8 | 4.7 | 4.8 |
| Finance, insurance, and real estate | 2.3 | 2.3 | 2.2 | 2.5 | 2.7 | 4.4 | 2.5 | 2.4 | 2.3 | 2.2 | 2.4 | 2.1 | 2.3 | 1.9 | 2.1 |
| Services | 4.1 | 3.8 | 3.9 | 4.1 | 3.8 | 4.0 | 3.8 | 3.9 | 3.8 | 3.9 | 3.8 | 3.7 | 3.6 | 3.7 | 3.6 |
| Government workers | 2.2 | 2.1 | 2.1 | 2.1 | 2.1 | 1.8 | 1.7 | 2.0 | 2.5 | 2.1 | 2.3 | 2.1 | 2.0 | 2.3 | 2.2 |
| Agricultural wage and salary workers | 8.9 | 7.5 | 6.9 | 5.4 | 6.6 | 6.0 | 8.3 | 7.4 | 7.2 | 7.2 | 8.0 | 7.9 | 8.8 | 9.4 | 8.9 |
| **Educational attainment**[1] | | | | | | | | | | | | | | | |
| Less than a high school diploma | 6.7 | 6.4 | 6.0 | 6.5 | 6.1 | 6.7 | 6.1 | 6.9 | 6.4 | 6.4 | 6.3 | 6.2 | 6.4 | 6.6 | 6.3 |
| High school graduates, no college | 3.5 | 3.5 | 3.5 | 3.5 | 3.5 | 3.4 | 3.4 | 3.5 | 3.4 | 3.4 | 3.7 | 3.4 | 3.5 | 3.5 | 3.4 |
| Some college, less than a bachelor's degree | 2.8 | 2.7 | 2.5 | 2.6 | 2.8 | 2.7 | 2.6 | 2.6 | 2.8 | 2.7 | 2.7 | 2.6 | 2.4 | 2.7 | 2.7 |
| College graduates | 1.8 | 1.7 | 1.8 | 1.8 | 1.6 | 1.6 | 1.6 | 1.6 | 1.6 | 1.7 | 1.7 | 1.9 | 1.6 | 1.6 | 1.6 |

[1] Data refer to persons 25 years and over.

## 7. Duration of unemployment, monthly data seasonally adjusted

[Numbers in thousands]

| Weeks of unemployment | Annual average | | 1999 | 2000 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept | Oct. | Nov. | Dec. |
| Less than 5 weeks | 2,568 | 2,543 | 2,630 | 2,521 | 2,582 | 2,764 | 2,500 | 2,536 | 2,572 | 2,493 | 2,567 | 2,498 | 2,510 | 2,531 | 2,440 |
| 5 to 14 weeks | 1,832 | 1,803 | 1,650 | 1,768 | 1,830 | 1,743 | 1,835 | 1,901 | 1,776 | 1,811 | 1,832 | 1,750 | 1,755 | 1,796 | 1,852 |
| 15 weeks and over | 1,480 | 1,309 | 1,368 | 1,364 | 1,292 | 1,300 | 1,274 | 1,325 | 1,260 | 1,319 | 1,373 | 1,247 | 1,311 | 1,317 | 1,326 |
| 15 to 26 weeks | 755 | 665 | 684 | 683 | 687 | 655 | 660 | 670 | 609 | 650 | 673 | 618 | 702 | 713 | 675 |
| 27 weeks and over | 725 | 644 | 684 | 681 | 605 | 645 | 614 | 655 | 651 | 669 | 700 | 629 | 609 | 604 | 651 |
| Mean duration, in weeks | 13.4 | 12.6 | 12.8 | 12.9 | 12.5 | 12.7 | 12.5 | 12.6 | 12.5 | 13.2 | 13.0 | 12.1 | 12.4 | 12.4 | 12.6 |
| Median duration, in weeks | 6.4 | 5.9 | 5.9 | 5.8 | 6.1 | 6.0 | 6.0 | 5.9 | 5.9 | 5.9 | 6.1 | 5.3 | 6.1 | 6.1 | 6.1 |

## 8. Unemployed persons by reason for unemployment, monthly data seasonally adjusted

[Numbers in thousands]

| Reason for unemployment | Annual average | | 1999 | 2000 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
| Job losers[1] | 2,622 | 2,492 | 2,379 | 2,493 | 2,614 | 2,463 | 2,402 | 2,460 | 2,439 | 2,450 | 2,585 | 2,502 | 2,446 | 2,501 | 2,514 |
| On temporary layoff | 848 | 842 | 772 | 764 | 833 | 803 | 723 | 875 | 917 | 857 | 907 | 837 | 825 | 877 | 937 |
| Not on temporary layoff | 1,774 | 1,650 | 1,607 | 1,729 | 1,781 | 1,660 | 1,679 | 1,585 | 1,522 | 1,593 | 1,678 | 1,665 | 1,621 | 1,624 | 1,577 |
| Job leavers | 783 | 775 | 826 | 781 | 767 | 813 | 812 | 776 | 692 | 788 | 780 | 756 | 815 | 768 | 746 |
| Reentrants | 2,005 | 1,957 | 2,056 | 2,033 | 1,992 | 1,981 | 1,967 | 2,052 | 2,042 | 1,960 | 1,930 | 1,798 | 1,868 | 1,936 | 1,899 |
| New entrants | 469 | 431 | 424 | 403 | 400 | 428 | 411 | 477 | 416 | 412 | 503 | 429 | 398 | 429 | 466 |
| **Percent of unemployed** | | | | | | | | | | | | | | | |
| Job losers[1] | 44.6 | 44.1 | 41.8 | 43.7 | 45.3 | 43.3 | 43.0 | 42.7 | 43.6 | 43.7 | 44.6 | 45.6 | 44.3 | 44.4 | 44.7 |
| On temporary layoff | 14.4 | 14.9 | 13.6 | 13.4 | 14.4 | 14.1 | 12.9 | 15.2 | 16.4 | 15.3 | 15.6 | 15.3 | 14.9 | 15.6 | 16.7 |
| Not on temporary layoff | 30.2 | 29.2 | 28.3 | 30.3 | 30.9 | 29.2 | 30.0 | 27.5 | 27.2 | 28.4 | 28.9 | 30.4 | 29.3 | 28.8 | 28.0 |
| Job leavers | 13.3 | 13.7 | 14.5 | 13.7 | 13.3 | 14.3 | 14.5 | 13.5 | 12.4 | 14.0 | 13.5 | 13.8 | 14.7 | 13.6 | 13.3 |
| Reentrants | 34.1 | 34.6 | 36.2 | 35.6 | 34.5 | 34.8 | 35.2 | 35.6 | 36.5 | 34.9 | 33.3 | 32.8 | 33.8 | 34.4 | 33.8 |
| New entrants | 8.0 | 7.6 | 7.5 | 7.1 | 6.9 | 7.5 | 7.3 | 8.3 | 7.4 | 7.3 | 8.7 | 7.8 | 7.2 | 7.6 | 8.3 |
| **Percent of civilian labor force** | | | | | | | | | | | | | | | |
| Job losers[1] | 1.9 | 1.8 | 1.7 | 1.8 | 1.9 | 1.8 | 1.7 | 1.7 | 1.7 | 1.7 | 1.8 | 1.8 | 1.7 | 1.8 | 1.8 |
| Job leavers | .6 | .6 | .6 | .6 | .5 | .6 | .6 | .6 | .5 | .6 | .6 | .5 | .6 | .5 | .5 |
| Reentrants | 1.4 | 1.4 | 1.5 | 1.4 | 1.4 | 1.4 | 1.4 | 1.5 | 1.5 | 1.4 | 1.4 | 1.3 | 1.3 | 1.4 | 1.3 |
| New entrants | .3 | .3 | .3 | .3 | .3 | .3 | .3 | .3 | .3 | .3 | .4 | .3 | .3 | .3 | .3 |

[1] Includes persons who completed temporary jobs.

## 9. Unemployment rates by sex and age, monthly data seasonally adjusted

[Civilian workers]

| Sex and age | Annual average | | 1999 | 2000 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
| Total, 16 years and over | 4.2 | 4.0 | 4.1 | 4.0 | 4.1 | 4.0 | 4.0 | 4.1 | 4.0 | 4.0 | 4.1 | 3.9 | 3.9 | 4.0 | 4.0 |
| 16 to 24 years | 9.9 | 9.3 | 9.6 | 9.4 | 9.8 | 9.7 | 9.4 | 9.7 | 9.1 | 9.2 | 9.4 | 8.9 | 8.9 | 9.1 | 9.2 |
| 16 to 19 years | 13.9 | 13.1 | 13.4 | 12.8 | 13.8 | 13.4 | 12.8 | 12.8 | 11.9 | 13.4 | 14.2 | 12.9 | 12.6 | 13.0 | 13.1 |
| 16 to 17 years | 16.3 | 15.4 | 16.1 | 14.6 | 15.6 | 15.3 | 14.9 | 15.8 | 13.4 | 16.3 | 16.9 | 15.7 | 15.2 | 15.4 | 15.8 |
| 18 to 19 years | 12.4 | 11.5 | 11.9 | 11.7 | 12.5 | 12.0 | 11.5 | 10.8 | 10.7 | 11.5 | 12.6 | 11.1 | 11.1 | 11.4 | 11.6 |
| 20 to 24 years | 7.5 | 7.1 | 7.3 | 7.4 | 7.4 | 7.5 | 7.3 | 7.9 | 7.5 | 6.9 | 6.6 | 6.6 | 6.8 | 6.8 | 7.0 |
| 25 years and over | 3.1 | 3.0 | 3.0 | 3.0 | 3.0 | 3.0 | 2.9 | 3.0 | 3.0 | 3.0 | 3.1 | 3.0 | 2.9 | 3.0 | 3.0 |
| 25 to 54 years | 3.2 | 3.1 | 3.0 | 3.1 | 3.0 | 3.0 | 3.0 | 3.1 | 3.1 | 3.1 | 3.2 | 3.0 | 3.0 | 3.0 | 3.0 |
| 55 years and over | 2.8 | 2.6 | 2.8 | 2.7 | 2.9 | 2.7 | 2.4 | 2.5 | 2.4 | 2.4 | 2.7 | 2.7 | 2.8 | 2.9 | 2.6 |
| Men, 16 years and over | 4.1 | 3.9 | 4.0 | 3.9 | 4.0 | 3.8 | 3.9 | 3.9 | 3.9 | 3.8 | 4.0 | 3.9 | 3.9 | 4.0 | 4.0 |
| 16 to 24 years | 10.3 | 9.7 | 10.3 | 9.8 | 10.1 | 9.3 | 9.7 | 10.0 | 9.6 | 9.6 | 10.2 | 9.5 | 9.4 | 9.5 | 9.7 |
| 16 to 19 years | 14.7 | 14.0 | 14.7 | 14.0 | 14.9 | 12.7 | 13.8 | 13.5 | 14.2 | 14.1 | 15.8 | 13.7 | 13.4 | 13.6 | 14.1 |
| 16 to 17 years | 17.0 | 16.8 | 17.0 | 15.2 | 16.6 | 15.6 | 16.0 | 16.8 | 15.9 | 17.5 | 17.1 | 17.5 | 17.6 | 17.5 | 18.4 |
| 18 to 19 years | 13.1 | 12.2 | 13.4 | 13.4 | 13.5 | 10.6 | 12.4 | 11.4 | 13.0 | 12.0 | 15.2 | 11.2 | 10.7 | 11.3 | 11.7 |
| 20 to 24 years | 7.7 | 7.3 | 7.7 | 7.3 | 7.3 | 7.4 | 7.4 | 8.1 | 7.0 | 7.1 | 6.9 | 7.1 | 7.3 | 7.3 | 7.2 |
| 25 years and over | 3.0 | 2.8 | 2.8 | 2.8 | 2.9 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.8 | 2.9 | 3.0 | 3.0 |
| 25 to 54 years | 3.0 | 2.9 | 2.8 | 2.9 | 2.9 | 2.8 | 2.8 | 2.8 | 2.9 | 2.8 | 2.9 | 2.9 | 2.9 | 2.9 | 2.9 |
| 55 years and over | 2.8 | 2.7 | 2.5 | 2.6 | 2.7 | 2.7 | 2.7 | 2.6 | 2.3 | 2.4 | 2.7 | 2.6 | 2.8 | 2.9 | 2.8 |
| Women, 16 years and over | 4.3 | 4.1 | 4.1 | 4.2 | 4.1 | 4.3 | 4.1 | 4.3 | 4.1 | 4.2 | 4.2 | 4.0 | 3.9 | 4.0 | 4.0 |
| 16 to 24 years | 9.5 | 8.9 | 8.8 | 9.0 | 9.4 | 10.0 | 8.9 | 9.4 | 8.5 | 8.9 | 8.6 | 8.2 | 8.4 | 8.6 | 8.7 |
| 16 to 19 years | 13.2 | 12.1 | 12.0 | 11.6 | 12.5 | 14.1 | 11.8 | 12.1 | 9.4 | 12.6 | 12.4 | 12.0 | 11.9 | 12.3 | 12.1 |
| 16 to 17 years | 15.5 | 14.0 | 15.2 | 14.0 | 14.3 | 15.0 | 13.7 | 14.8 | 10.7 | 15.0 | 16.8 | 13.8 | 12.8 | 13.4 | 13.2 |
| 18 to 19 years | 11.6 | 10.8 | 10.3 | 9.8 | 11.3 | 13.4 | 10.5 | 10.2 | 8.2 | 10.9 | 9.8 | 11.0 | 11.6 | 11.5 | 11.6 |
| 20 to 24 years | 7.2 | 7.0 | 6.9 | 7.5 | 7.6 | 7.5 | 7.2 | 7.8 | 8.0 | 6.7 | 6.3 | 6.0 | 6.3 | 6.3 | 6.7 |
| 25 years and over | 3.3 | 3.2 | 3.2 | 3.2 | 3.1 | 3.2 | 3.1 | 3.2 | 3.2 | 3.3 | 3.4 | 3.2 | 3.0 | 3.1 | 3.0 |
| 25 to 54 years | 3.4 | 3.3 | 3.2 | 3.3 | 3.1 | 3.3 | 3.2 | 3.4 | 3.3 | 3.4 | 3.5 | 3.2 | 3.1 | 3.2 | 3.1 |
| 55 years and over | 2.8 | 2.6 | 3.1 | 2.9 | 3.1 | 2.6 | 2.0 | 2.4 | 2.4 | 2.4 | 2.6 | 2.8 | 2.8 | 2.7 | 2.4 |

## 10. Unemployment rates by State, seasonally adjusted

| State | Nov. 1999 | Oct. 2000 | Nov. 2000[p] | State | Nov. 1999 | Oct. 2000 | Nov. 2000[p] |
|---|---|---|---|---|---|---|---|
| Alabama | 4.7 | 4.4 | 4.7 | Missouri | 2.9 | 3.7 | 3.2 |
| Alaska | 6.0 | 6.0 | 6.0 | Montana | 4.9 | 4.9 | 5.0 |
| Arizona | 4.2 | 3.8 | 3.7 | Nebraska | 2.7 | 2.8 | 2.8 |
| Arkansas | 4.2 | 3.7 | 4.2 | Nevada | 4.3 | 4.2 | 4.4 |
| California | 4.9 | 4.8 | 4.8 | New Hampshire | 2.5 | 2.5 | 1.8 |
| Colorado | 2.8 | 2.5 | 2.7 | New Jersey | 4.4 | 3.8 | 4.0 |
| Connecticut | 2.9 | 2.0 | 1.7 | New Mexico | 5.7 | 5.5 | 5.5 |
| Delaware | 3.5 | 3.8 | 3.8 | New York | 4.9 | 4.4 | 4.6 |
| District of Columbia | 5.9 | 6.0 | 5.7 | North Carolina | 3.2 | 3.7 | 3.8 |
| Florida | 3.9 | 3.7 | 3.6 | North Dakota | 3.0 | 2.4 | 2.9 |
| Georgia | 3.6 | 3.6 | 3.0 | Ohio | 4.1 | 4.0 | 3.9 |
| Hawaii | 5.2 | 3.9 | 3.8 | Oklahoma | 3.2 | 3.0 | 2.9 |
| Idaho | 4.6 | 4.7 | 4.9 | Oregon | 5.2 | 5.4 | 4.2 |
| Illinois | 4.2 | 3.9 | 4.4 | Pennsylvania | 4.2 | 4.2 | 4.2 |
| Indiana | 3.0 | 2.4 | 2.5 | Rhode Island | 3.9 | 3.3 | 3.6 |
| Iowa | 2.2 | 2.5 | 2.5 | South Carolina | 4.5 | 2.5 | 2.8 |
| Kansas | 3.1 | 3.5 | 3.4 | South Dakota | 2.6 | 2.5 | 2.3 |
| Kentucky | 4.1 | 4.0 | 3.9 | Tennessee | 3.8 | 3.7 | 4.1 |
| Louisiana | 4.5 | 5.3 | 6.0 | Texas | 4.6 | 4.3 | 4.2 |
| Maine | 3.7 | 3.5 | 2.5 | Utah | 3.1 | 3.1 | 3.3 |
| Maryland | 3.3 | 3.6 | 3.6 | Vermont | 2.8 | 2.7 | 2.8 |
| Massachusetts | 3.3 | 2.4 | 2.6 | Virginia | 2.8 | 2.4 | 2.1 |
| Michigan | 3.7 | 3.6 | 3.7 | Washington | 4.3 | 4.8 | 5.0 |
| Minnesota | 2.6 | 2.8 | 3.1 | West Virginia | 6.3 | 5.5 | 5.9 |
| Mississippi | 5.0 | 5.3 | 5.9 | Wisconsin | 3.0 | 3.0 | 3.0 |
| | | | | Wyoming | 4.5 | 3.9 | 3.8 |

[p] = preliminary

## 11. Employment of workers on nonfarm payrolls by State, seasonally adjusted

[In thousands]

| State | Nov. 1999 | Oct. 2000 | Nov. 2000[p] | State | Nov. 1999 | Oct. 2000 | Nov. 2000[p] |
|---|---|---|---|---|---|---|---|
| Alabama | 1,937.3 | 1,045.2 | 1,940.9 | Missouri | 2,739.7 | 2,767.9 | 2778/0 |
| Alaska | 277.3 | 283.3 | 281.4 | Montana | 385.4 | 391.6 | 393.0 |
| Arizona | 2,190.5 | 2,277.4 | 2,272.1 | Nebraska | 893.8 | 885.6 | 884.8 |
| Arkansas | 1,151.4 | 1,174.9 | 1,178.4 | Nevada | 1,004.2 | 1,044.0 | 1,049.4 |
| California | 14,120.9 | 14,535.0 | 14,561.3 | New Hampshire | 609.2 | 612.3 | 614.5 |
| Colorado | 2,161.8 | 2,216.3 | 2,223.3 | New Jersey | 3,889.8 | 3,943.3 | 3,946.1 |
| Connecticut | 1678,.2 | 1,698.2 | 1,698.6 | New Mexico | 734.5 | 748.8 | 749.4 |
| Delaware | 416.0 | 423.2 | 424.2 | New York | 8,514.9 | 8,664.6 | 8,677.9 |
| District of Columbia | 619.2 | 621.7 | 624.1 | North Carolina | 3,885.7 | 3,918.7 | 3,916.0 |
| Florida | 6,990.2 | 7,232.9 | 7,248.2 | North Dakota | 326.5 | 325.9 | 325.3 |
| Georgia | 3,939.1 | 3,995.8 | 3,994.9 | Ohio | 5,571.6 | 5,600.0 | 5,604.9 |
| Hawaii | 537.3 | 546.5 | 546.3 | Oklahoma | 1,472.3 | 1,494.9 | 1,497.0 |
| Idaho | 547.9 | 562.7 | 568.2 | Oregon | 1,586.3 | 1,597.9 | 1,601.8 |
| Illinois | 5,979.3 | 6,019.6 | 6,022.9 | Pennsylvania | 5,583.8 | 5,595.0 | 5,595.3 |
| Indiana | 2,984.8 | 2,994.9 | 2,996.1 | Rhode Island | 467.7 | 474.9 | 474.4 |
| Iowa | 1,469.4 | 1,498.1 | 1,501.6 | South Carolina | 1,850.0 | 1,881.6 | 1,895.1 |
| Kansas | 1,337.2 | 1,359.2 | 1,363.1 | South Dakota | 377.9 | 379.2 | 380.8 |
| Kentucky | 1,809.6 | 1,838.7 | 1,840.2 | Tennessee | 2,688.7 | 2,710.4 | 2,712.2 |
| Louisiana | 1,907.8 | 1,915.2 | 1,918.0 | Texas | 9,239.8 | 9,463.7 | 9,489.6 |
| Maine | 591.8 | 585,5 | 602.3 | Utah | 1,060.3 | 1,082.7 | 1,086.8 |
| Maryland | 2,401.2 | 2,455.6 | 2,459.4 | Vermont | 291.4 | 296.5 | 297.1 |
| Massachusetts | 3,255.5 | 3,311.5 | 3,315.3 | Virginia | 3,435.9 | 3,498.2 | 3,508.9 |
| Michigan | 4,575.5 | 4598,8 | 4,618.7 | Washington | 2,660.1 | 2,705.6 | 2,713.2 |
| Minnesota | 2,627.0 | 2,665.4 | 2,673.3 | West Virginia | 727.3 | 733.0 | 735.2 |
| Mississippi | 1,158.4 | 1,145.3 | 1,149.2 | Wisconsin | 2,789.3 | 2,835.5 | 2,841.7 |
| | | | | Wyoming | 233.3 | 240.0 | 241.4 |

[p] = preliminary

NOTE: Some data in this table may differ from data published elsewhere because of the continual updating of the data base.

## 12. Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

| Industry | Annual average | | 1999 | 2000 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000[P] | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov[P] | Dec.[P] |
| TOTAL | 128,786 | 131,417 | 130,038 | 130,387 | 130,482 | 131,009 | 131,419 | 131,590 | 131,647 | 131,607 | 131,528 | 131,723 | 131,789 | 131,842 | 131,861 |
| PRIVATE SECTOR | 108,616 | 110,847 | 109,730 | 110,036 | 110,088 | 110,462 | 110,752 | 110,578 | 110,845 | 111,001 | 111,018 | 111,232 | 111,325 | 111,437 | 111,447 |
| GOODS-PRODUCING | 25,482 | 25,661 | 25,561 | 25,677 | 25,624 | 25,738 | 25,725 | 25,684 | 25,700 | 25,756 | 25,644 | 25,639 | 25,665 | 25,527 | 25,560 |
| Mining | 535 | 538 | 530 | 530 | 533 | 536 | 539 | 539 | 539 | 538 | 537 | 539 | 542 | 541 | 540 |
| Metal mining | 45 | 44 | 45 | 45 | 45 | 45 | 45 | 44 | 44 | 43 | 44 | 44 | 44 | 43 | 44 |
| Oil and gas extraction | 293 | 304 | 291 | 293 | 296 | 300 | 303 | 305 | 306 | 306 | 304 | 307 | 309 | 311 | 311 |
| Nonmetallic minerals, except fuels | 112 | 110 | 111 | 111 | 111 | 111 | 111 | 110 | 110 | 110 | 109 | 108 | 109 | 109 | 107 |
| Construction | 6,404 | 6,687 | 6,552 | 6,652 | 6,618 | 6,726 | 6,694 | 6,666 | 6,668 | 6,670 | 6,675 | 6,720 | 6,745 | 6,734 | 6,716 |
| General building contractors | 1,450 | 1,505 | 1,474 | 1,498 | 1,491 | 1,508 | 1,497 | 1,497 | 1,498 | 1,498 | 1,505 | 1,510 | 1,517 | 1,523 | 1,525 |
| Heavy construction, except building | 869 | 886 | 882 | 892 | 885 | 905 | 899 | 888 | 877 | 881 | 882 | 885 | 892 | 882 | 867 |
| Special trades contractors | 4,084 | 4,296 | 4,196 | 4,262 | 4,242 | 4,313 | 4,298 | 4,281 | 4,293 | 4,291 | 4,288 | 4,325 | 4,336 | 4,329 | 4,324 |
| Manufacturing | 18,543 | 18,437 | 18,479 | 18,495 | 18,473 | 18,476 | 18,492 | 18,479 | 18,493 | 18,548 | 18,432 | 18,380 | 18,378 | 18,360 | 18,304 |
| Production workers | 12,739 | 12,642 | 12,701 | 12,713 | 12,697 | 12,683 | 12,689 | 12,682 | 12,683 | 12,741 | 12,630 | 12,585 | 12,583 | 12,567 | 12,511 |
| Durable goods | 11,103 | 11,084 | 11,087 | 11,099 | 11,088 | 11,094 | 11,104 | 11,106 | 11,120 | 11,161 | 11,087 | 11,052 | 11,052 | 11,058 | 11,032 |
| Production workers | 7,590 | 7,569 | 7,579 | 7,592 | 7,592 | 7,580 | 7,584 | 7,584 | 7,593 | 7,629 | 7,567 | 7,541 | 7,542 | 7,546 | 7,517 |
| Lumber and wood products | 828 | 821 | 831 | 830 | 832 | 830 | 830 | 828 | 827 | 825 | 818 | 816 | 812 | 807 | 802 |
| Furniture and fixtures | 548 | 555 | 552 | 553 | 553 | 555 | 557 | 558 | 558 | 564 | 555 | 556 | 555 | 554 | 551 |
| Stone, clay, and glass products | 563 | 566 | 565 | 568 | 567 | 568 | 567 | 566 | 568 | 571 | 566 | 565 | 564 | 563 | 561 |
| Primary metal industries | 700 | 695 | 698 | 699 | 699 | 701 | 699 | 699 | 699 | 698 | 695 | 691 | 691 | 690 | 682 |
| Fabricated metal products | 1,517 | 1,533 | 1,521 | 1,523 | 1,525 | 1,528 | 1,534 | 1,535 | 1,540 | 1,539 | 1,539 | 1,534 | 1,533 | 1,535 | 1,531 |
| Industrial machinery and equipment | 2,141 | 2,128 | 2,132 | 2,130 | 2,131 | 2,124 | 2,126 | 2,125 | 2,130 | 2,137 | 2,133 | 2,121 | 2,124 | 2,127 | 2,117 |
| Computer and office equipment | 370 | 363 | 370 | 369 | 368 | 366 | 364 | 360 | 360 | 361 | 363 | 361 | 361 | 361 | 362 |
| Electronic and other electrical equipment | 1,670 | 1,704 | 1,673 | 1,679 | 1,684 | 1,682 | 1,691 | 1,693 | 1,697 | 1,719 | 1,718 | 1,714 | 1,719 | 1,724 | 1,727 |
| Electronic components and accessories | 636 | 667 | 640 | 642 | 645 | 646 | 651 | 654 | 661 | 670 | 675 | 681 | 687 | 694 | 696 |
| Transportation equipment | 1,884 | 1,841 | 1,867 | 1,871 | 1,855 | 1,865 | 1,859 | 1,863 | 1,864 | 1,863 | 1,818 | 1,813 | 1,812 | 1,814 | 1,808 |
| Motor vehicles and equipment | 1,019 | 1,011 | 1,023 | 1,027 | 1,029 | 1,028 | 1,026 | 1,026 | 1,030 | 1,029 | 993 | 993 | 991 | 989 | 983 |
| Aircraft and parts | 495 | 459 | 470 | 469 | 453 | 467 | 461 | 463 | 460 | 460 | 456 | 457 | 456 | 455 | 457 |
| Instruments and related products | 856 | 846 | 849 | 847 | 844 | 844 | 844 | 845 | 844 | 849 | 849 | 847 | 847 | 850 | 850 |
| Miscellaneous manufacturing industries | 395 | 396 | 399 | 399 | 398 | 397 | 397 | 394 | 393 | 396 | 396 | 395 | 395 | 394 | 393 |
| Nondurable goods | 7,440 | 7,352 | 7,392 | 7,396 | 7,385 | 7,382 | 7,388 | 7,373 | 7,373 | 7,387 | 7,345 | 7,328 | 7,326 | 7,302 | 7,272 |
| Production workers | 5,149 | 5,073 | 5,122 | 5,121 | 5,105 | 5,103 | 5,105 | 5,098 | 5,090 | 5,112 | 5,063 | 5,044 | 5,041 | 5,018 | 4,994 |
| Food and kindred products | 1,677 | 1,672 | 1,674 | 1,681 | 1,672 | 1,671 | 1,678 | 1,675 | 1,679 | 1,680 | 1,670 | 1,661 | 1,673 | 1,667 | 6,777 |
| Tobacco products | 39 | 36 | 38 | 38 | 37 | 35 | 37 | 37 | 37 | 37 | 34 | 37 | 37 | 37 | 37 |
| Textile mill products | 560 | 541 | 549 | 548 | 549 | 549 | 548 | 545 | 542 | 544 | 542 | 539 | 536 | 530 | 525 |
| Apparel and other textile products | 692 | 649 | 669 | 666 | 665 | 665 | 665 | 660 | 652 | 656 | 644 | 639 | 633 | 630 | 623 |
| Paper and allied products | 668 | 661 | 665 | 664 | 663 | 662 | 662 | 661 | 663 | 662 | 660 | 660 | 660 | 657 | 656 |
| Printing and publishing | 1,553 | 1,556 | 1,548 | 1,549 | 1,550 | 1,551 | 1,554 | 1,552 | 1,558 | 1,561 | 1,560 | 1,560 | 1,559 | 1,557 | 1,554 |
| Chemicals and allied products | 1,034 | 1,027 | 1,030 | 1,031 | 1,031 | 1,031 | 1,030 | 1,028 | 1,028 | 1,026 | 1,024 | 1,024 | 1,023 | 1,024 | 1,022 |
| Petroleum and coal products | 134 | 131 | 132 | 132 | 132 | 132 | 132 | 132 | 132 | 131 | 132 | 132 | 131 | 130 | 128 |
| Rubber and miscellaneous plastics products | 1,006 | 1,005 | 1,011 | 1,011 | 1,010 | 1,010 | 1,007 | 1,008 | 1,008 | 1,014 | 1,005 | 1,002 | 1,001 | 998 | 990 |
| Leather and leather products | 78 | 74 | 76 | 76 | 76 | 76 | 75 | 75 | 74 | 76 | 74 | 74 | 73 | 72 | 71 |
| SERVICE-PRODUCING | 103,304 | 105,756 | 104,477 | 104,710 | 104,858 | 105,271 | 105,694 | 105,906 | 105,947 | 105,851 | 105,884 | 106,084 | 106,124 | 106,207 | 106,301 |
| Transportation and public utilities | 6,826 | 6,993 | 6,911 | 6,925 | 6,937 | 6,953 | 6,970 | 6,962 | 6,985 | 7,010 | 6,941 | 7,037 | 7,046 | 7,060 | 7,086 |
| Transportation | 4,409 | 4,524 | 4,459 | 4,470 | 4,479 | 4,492 | 4,509 | 4,501 | 4,510 | 4,536 | 4,549 | 4,549 | 4,549 | 4,563 | 4,580 |
| Railroad transportation | 230 | 220 | 226 | 225 | 225 | 222 | 221 | 219 | 217 | 219 | 221 | 219 | 219 | 220 | 217 |
| Local and interurban passenger transit | 485 | 497 | 491 | 493 | 494 | 494 | 498 | 498 | 493 | 502 | 503 | 500 | 498 | 500 | 500 |
| Trucking and warehousing | 1,805 | 1,839 | 1,818 | 1,827 | 1,828 | 1,833 | 1,839 | 1,834 | 1,834 | 1,846 | 1,845 | 1,845 | 1,843 | 1,839 | 1,850 |
| Water transportation | 187 | 201 | 192 | 192 | 196 | 197 | 200 | 200 | 202 | 199 | 204 | 206 | 206 | 206 | 206 |
| Transportation by air | 1,227 | 1,282 | 1,253 | 1,256 | 1,259 | 1,268 | 1,270 | 1,269 | 1,279 | 1,282 | 1,288 | 1,291 | 1,297 | 1,310 | 1,317 |
| Pipelines, except natural gas | 13 | 13 | 13 | 13 | 12 | 12 | 12 | 12 | 12 | 13 | 12 | 12 | 12 | 13 | 12 |
| Transportation services | 463 | 472 | 466 | 464 | 465 | 466 | 469 | 469 | 473 | 475 | 476 | 476 | 474 | 475 | 478 |
| Communications and public utilities | 2,416 | 2,469 | 2,452 | 2,455 | 2,458 | 2,461 | 2,461 | 2,461 | 2,475 | 2,474 | 2,392 | 2,488 | 2,497 | 2,497 | 2,506 |
| Communications | 1,552 | 1,612 | 1,588 | 1,591 | 1,598 | 1,602 | 1,604 | 1,606 | 1,619 | 1,618 | 1,537 | 1,632 | 1,641 | 1,644 | 1,654 |
| Electric, gas, and sanitary services | 865 | 857 | 864 | 864 | 860 | 859 | 857 | 855 | 856 | 856 | 855 | 856 | 856 | 853 | 852 |
| Wholesale trade | 6,924 | 7,054 | 7,002 | 7,005 | 7,011 | 7,017 | 7,055 | 7,048 | 7,049 | 7,050 | 7,062 | 7,070 | 7,087 | 7,093 | 7,085 |
| Retail trade | 22,788 | 23,137 | 22,936 | 22,973 | 22,987 | 23,027 | 23,197 | 23,064 | 23,122 | 23,196 | 23,191 | 23,179 | 23,193 | 23,238 | 23,256 |
| Building materials and garden supplies | 989 | 1,021 | 1,012 | 1,016 | 1,020 | 1,034 | 1,032 | 1,025 | 1,018 | 1,018 | 1,021 | 1,019 | 1,022 | 1,020 | 1,018 |
| General merchandise stores | 2,771 | 2,753 | 2,766 | 2,765 | 2,762 | 2,756 | 2,791 | 2,744 | 2,741 | 2,727 | 2,740 | 2,739 | 2,740 | 2,770 | 2,747 |
| Department stores | 2,431 | 2,402 | 2,416 | 2,419 | 2,417 | 2,409 | 2,443 | 2,388 | 2,386 | 2,373 | 2,393 | 2,389 | 2,389 | 2,419 | 2,415 |

See footnotes at end of table.

## 12. Continued—Employment of workers on nonfarm payrolls by industry, monthly data seasonally adjusted

[In thousands]

| Industry | Annual average | | 1999 | 2000 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000[p] | Dec. | Jan. | Feb. | Mar. | Apr. | May. | June | July | Aug. | Sept. | Oct. | Nov.[p] | Dec.[p] |
| Food stores | 3,495 | 3,516 | 3,501 | 3,501 | 3,503 | 3,502 | 3,522 | 3,516 | 3,515 | 3,519 | 3,522 | 3,522 | 3,519 | 3,516 | 3,527 |
| Automotive dealers and service stations | 2,369 | 2,414 | 2,386 | 2,399 | 2,394 | 2,407 | 2,410 | 2,408 | 2,412 | 2,411 | 2,418 | 2,424 | 2,431 | 2,430 | 2,428 |
| New and used car dealers | 1,079 | 1,111 | 1,094 | 1,097 | 1,100 | 1,105 | 1,106 | 1,107 | 1,110 | 1,111 | 1,115 | 1,118 | 1,120 | 1,120 | 1,121 |
| Apparel and accessory stores | 1,174 | 1,174 | 1,182 | 1,176 | 1,184 | 1,188 | 1,195 | 1,195 | 1,197 | 1,206 | 1,202 | 1,209 | 1,205 | 1,211 | 1,217 |
| Furniture and home furnishings stores | 1,082 | 1,199 | 1,098 | 1,099 | 1,102 | 1,111 | 1,113 | 1,113 | 1,118 | 1,119 | 1,121 | 1,122 | 1,128 | 1,130 | 1,139 |
| Eating and drinking places | 7,940 | 8,065 | 7,986 | 7,998 | 7,992 | 8,000 | 8,097 | 8,028 | 8,071 | 8,132 | 8,099 | 8,076 | 8,073 | 8,097 | 8,113 |
| Miscellaneous retail establishments | 2,969 | 3,050 | 3,005 | 3,019 | 3,021 | 3,029 | 3,037 | 3,035 | 3,050 | 3,064 | 3,068 | 3,068 | 3,075 | 3,064 | 3,067 |
| **Finance, insurance, and real estate** | 7,569 | 7,618 | 7,613 | 7,612 | 7,624 | 7,621 | 7,610 | 7,600 | 7,588 | 7,586 | 7,608 | 7,622 | 7,638 | 7,647 | 7,660 |
| Finance | 3,691 | 3,720 | 3,710 | 3,709 | 3,717 | 3,713 | 3,709 | 3,703 | 3,705 | 3,708 | 3,717 | 3,729 | 3,737 | 3,739 | 3,748 |
| Depository institutions | 2,061 | 2,043 | 2,059 | 2,058 | 2,057 | 2,054 | 2,052 | 2,044 | 2,042 | 2,036 | 2,037 | 2,038 | 2,034 | 2,033 | 2,035 |
| Commercial banks | 1,476 | 1,455 | 1,471 | 1,470 | 1,469 | 1,466 | 1,464 | 1,456 | 1,454 | 1,449 | 1,450 | 1,450 | 1,446 | 1,445 | 1,445 |
| Savings institutions | 252 | 241 | 248 | 247 | 245 | 243 | 243 | 243 | 242 | 240 | 240 | 239 | 238 | 237 | 237 |
| Nondepository institutions | 710 | 689 | 704 | 699 | 699 | 692 | 686 | 684 | 682 | 683 | 683 | 687 | 689 | 690 | 690 |
| Security and commodity brokers | 688 | 745 | 713 | 716 | 723 | 728 | 732 | 736 | 741 | 748 | 753 | 759 | 766 | 768 | 773 |
| Holding and other investment offices | 231 | 242 | 234 | 236 | 238 | 239 | 239 | 239 | 240 | 241 | 244 | 245 | 248 | 248 | 250 |
| Insurance | 2,371 | 2,362 | 2,378 | 2,372 | 2,373 | 2,373 | 2,365 | 2,361 | 2,359 | 2,354 | 2,358 | 2,353 | 2,355 | 2,362 | 2,362 |
| Insurance carriers | 1,611 | 1,592 | 1,610 | 1,606 | 1,606 | 1,605 | 1,597 | 1,594 | 1,593 | 1,585 | 1,587 | 1,582 | 1,581 | 1,587 | 1,586 |
| Insurance agents, brokers, and service | 761 | 770 | 768 | 766 | 767 | 768 | 768 | 767 | 766 | 769 | 771 | 771 | 774 | 775 | 776 |
| Real estate | 1,507 | 1,536 | 1,525 | 1,531 | 1,534 | 1,535 | 1,536 | 1,536 | 1,524 | 1,524 | 1,533 | 1,540 | 1,546 | 1,546 | 1,550 |
| **Services**[1] | 39,027 | 40,384 | 39,707 | 39,844 | 39,914 | 40,090 | 40,195 | 40,220 | 40,401 | 40,403 | 40,572 | 40,685 | 40,696 | 40,764 | 40,800 |
| Agricultural services | 766 | 800 | 782 | 806 | 796 | 812 | 801 | 790 | 788 | 794 | 799 | 801 | 806 | 810 | 806 |
| Hotels and other lodging places | 1,848 | 1,910 | 1,868 | 1,866 | 1,868 | 1,885 | 1,902 | 1,904 | 1,922 | 1,925 | 1,921 | 1,923 | 1,924 | 1,939 | 1,945 |
| Personal services | 1,233 | 1,276 | 1,257 | 1,263 | 1,265 | 1,265 | 1,272 | 1,262 | 1,271 | 1,273 | 1,285 | 1,285 | 1,285 | 1,288 | 1,291 |
| Business services | 9,267 | 9,746 | 9,538 | 9,571 | 9,615 | 9,681 | 9,735 | 9,715 | 9,773 | 9,768 | 9,800 | 9,853 | 9,829 | 9,823 | 9,745 |
| Services to buildings | 985 | 1,001 | 997 | 997 | 1,000 | 1,004 | 1,001 | 996 | 997 | 1,002 | 1,000 | 1,001 | 1,000 | 1,004 | 1,007 |
| Personnel supply services | 3,601 | 3,835 | 3,748 | 3,753 | 3,773 | 3,817 | 3,885 | 3,855 | 3,873 | 3,851 | 3,865 | 3,891 | 3,861 | 3,845 | 3,746 |
| Help supply services | 3,228 | 3,419 | 3,358 | 3,361 | 3,382 | 3,418 | 3,485 | 3,440 | 3,444 | 3,433 | 3,436 | 3,463 | 3,432 | 3,413 | 3,340 |
| Computer and data processing services | 1,831 | 1,941 | 1,888 | 1,896 | 1,906 | 1,915 | 1,927 | 1,929 | 1,933 | 1,950 | 1,951 | 1,955 | 1,966 | 1,928 | 1,966 |
| Auto repair services and parking | 1,184 | 1,198 | 1,192 | 1,194 | 1,195 | 1,192 | 1,195 | 1,192 | 1,191 | 1,194 | 1,198 | 1,200 | 1,206 | 1,206 | 1,216 |
| Miscellaneous repair services | 377 | 384 | 382 | 382 | 384 | 384 | 383 | 383 | 384 | 384 | 384 | 385 | 386 | 386 | 383 |
| Motion pictures | 610 | 631 | 624 | 626 | 623 | 630 | 634 | 632 | 635 | 634 | 636 | 631 | 630 | 631 | 639 |
| Amusement and recreation services | 1,660 | 1,771 | 1,703 | 1,721 | 1,723 | 1,729 | 1,752 | 1,755 | 1,789 | 1,795 | 1,808 | 1,785 | 1,791 | 1,793 | 1,790 |
| Health services | 9,989 | 10,139 | 10,053 | 10,066 | 10,078 | 10,091 | 10,093 | 10,104 | 10,116 | 10,143 | 10,161 | 10,178 | 10,191 | 10,208 | 10,228 |
| Offices and clinics of medical doctors | 1,877 | 1,933 | 1,903 | 1,910 | 1,914 | 1,920 | 1,925 | 1,928 | 1,928 | 1,930 | 1,935 | 1,945 | 1,950 | 1,953 | 1,958 |
| Nursing and personal care facilities | 1,785 | 1,791 | 1,787 | 1,788 | 1,790 | 1,791 | 1,789 | 1,788 | 1,786 | 1,787 | 1,793 | 1,791 | 1,793 | 1,793 | 1,796 |
| Hospitals | 3,982 | 4,019 | 3,997 | 4,001 | 4,002 | 4,004 | 3,999 | 4,005 | 4,008 | 4,018 | 4,021 | 4,029 | 4,032 | 4,045 | 4,053 |
| Home health care services | 636 | 642 | 637 | 638 | 639 | 639 | 641 | 641 | 642 | 645 | 646 | 645 | 645 | 644 | 642 |
| Legal services | 997 | 1,011 | 1,007 | 1,008 | 1,007 | 1,007 | 1,004 | 1,006 | 1,009 | 1,012 | 1,014 | 1,014 | 1,016 | 1,014 | 1,015 |
| Educational services | 2,276 | 2,355 | 2,309 | 2,308 | 2,309 | 2,329 | 2,329 | 2,356 | 2,374 | 2,374 | 2,395 | 2,388 | 2,357 | 2,365 | 2,389 |
| Social services | 2,800 | 2,963 | 2,884 | 2,905 | 2,912 | 2,929 | 2,940 | 2,946 | 2,945 | 2,919 | 2,955 | 3,001 | 3,019 | 3,032 | 3,055 |
| Child day care services | 695 | 764 | 729 | 737 | 740 | 749 | 753 | 758 | 760 | 768 | 774 | 779 | 784 | 787 | 792 |
| Residential care | 775 | 823 | 800 | 803 | 807 | 810 | 812 | 816 | 820 | 826 | 827 | 833 | 838 | 840 | 845 |
| Museums and botanical and zoological gardens | 98 | 102 | 99 | 100 | 100 | 101 | 102 | 101 | 103 | 103 | 103 | 103 | 103 | 104 | 104 |
| Membership organizations | 2,425 | 2,441 | 2,438 | 2,439 | 2,439 | 2,440 | 2,439 | 2,438 | 2,441 | 2,429 | 2,433 | 2,445 | 2,446 | 2,450 | 2,451 |
| Engineering and management services | 3,254 | 3,413 | 3,327 | 3,344 | 3,354 | 3,369 | 3,368 | 3,390 | 3,415 | 3,411 | 3,435 | 3,449 | 3,463 | 3,471 | 3,489 |
| Engineering and architectural services | 953 | 1,002 | 974 | 982 | 984 | 985 | 987 | 995 | 1,005 | 1,007 | 1,010 | 1,012 | 1,015 | 1,015 | 1,023 |
| Management and public relations | 1,036 | 1,107 | 1,068 | 1,074 | 1,077 | 1,085 | 1,088 | 1,096 | 1,110 | 1,107 | 1,118 | 1,123 | 1,129 | 1,137 | 1,141 |
| **Government** | 20,170 | 20,570 | 20,308 | 20,351 | 20,394 | 20,547 | 20,667 | 21,012 | 20,802 | 20,606 | 20,510 | 20,491 | 20,464 | 20,405 | 20,414 |
| Federal | 2,669 | 2,778 | 2,646 | 2,663 | 2,700 | 2,816 | 2,885 | 3,238 | 3,092 | 2,819 | 2,657 | 2,627 | 2,625 | 2,615 | 2,570 |
| Federal, except Postal Service | 1,796 | 1,918 | 1,780 | 1,797 | 1,835 | 1,951 | 2,022 | 2,374 | 2,230 | 1,954 | 1,790 | 1,764 | 1,762 | 1,760 | 1,757 |
| State | 4,695 | 4,746 | 4,727 | 4,725 | 4,728 | 4,733 | 4,744 | 4,737 | 4,716 | 4,774 | 4,765 | 4,776 | 4,755 | 4,748 | 4,768 |
| Education | 1,968 | 1,988 | 1,983 | 1,981 | 1,981 | 1,982 | 1,990 | 1,983 | 1,967 | 1,994 | 2,002 | 2,009 | 1,988 | 1,977 | 1,992 |
| Other State government | 2,727 | 2,758 | 2,744 | 2,744 | 2,747 | 2,751 | 2,754 | 2,754 | 2,749 | 2,750 | 2,763 | 2,767 | 2,767 | 2,771 | 2,776 |
| Local | 12,806 | 13,047 | 12,935 | 12,963 | 12,966 | 12,998 | 13,038 | 13,037 | 12,994 | 13,043 | 13,088 | 13,088 | 13,084 | 13,042 | 13,076 |
| Education | 7,272 | 7,394 | 7,343 | 7,356 | 7,355 | 7,373 | 7,408 | 7,395 | 7,361 | 7,394 | 7,411 | 7,396 | 7,391 | 7,377 | 7,383 |
| Other local government | 5,534 | 5,656 | 5,592 | 5,607 | 5,611 | 5,625 | 5,630 | 5,642 | 5,633 | 5,649 | 5,677 | 5,692 | 5,693 | 5,665 | 5,693 |

[1] Includes other industries not shown separately.

[p] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

## 13. Average weekly hours of production or nonsupervisory workers on private nonfarm payrolls, by industry, monthly data seasonally adjusted

| Industry | Annual average | | 1999 | 2000 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000[P] | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov.[P] | Dec.[P] |
| **PRIVATE SECTOR** | 34.5 | 34.5 | 34.5 | 34.5 | 34.6 | 34.5 | 34.6 | 34.4 | 34.5 | 34.4 | 34.3 | 34.4 | 34.4 | 34.3 | 34.1 |
| **GOODS-PRODUCING** | 41.0 | 40.9 | 41.0 | 41.1 | 41.3 | 41.2 | 41.5 | 40.9 | 40.9 | 41.1 | 40.8 | 40.7 | 40.9 | 40.5 | 39.7 |
| **MINING** | 43.8 | 44.9 | 44.3 | 44.7 | 44.7 | 44.7 | 45.3 | 44.1 | 44.7 | 45.3 | 44.6 | 45.2 | 45.6 | 44.9 | 44.4 |
| **MANUFACTURING** | 41.7 | 41.5 | 41.7 | 41.7 | 41.8 | 41.7 | 42.2 | 41.4 | 41.6 | 41.7 | 41.4 | 41.3 | 41.4 | 41.2 | 40.4 |
| Overtime hours | 4.6 | 4.5 | 4.7 | 4.6 | 4.7 | 4.6 | 4.9 | 4.5 | 4.6 | 4.6 | 4.5 | 4.4 | 4.5 | 4.3 | 4.0 |
| **Durable goods** | 42.2 | 42.0 | 42.2 | 42.3 | 42.3 | 42.3 | 42.8 | 42.0 | 42.2 | 42.4 | 41.9 | 41.8 | 41.9 | 41.7 | 40.6 |
| Overtime hours | 4.8 | 4.7 | 4.8 | 4.8 | 4.9 | 4.8 | 5.1 | 4.7 | 4.8 | 4.7 | 4.6 | 4.5 | 4.6 | 4.4 | 4.0 |
| Lumber and wood products | 41.2 | 40.7 | 41.0 | 41.1 | 41.0 | 40.9 | 41.2 | 40.7 | 40.8 | 41.1 | 40.4 | 40.5 | 40.6 | 40.6 | 39.7 |
| Furniture and fixtures | 40.3 | 39.8 | 40.2 | 40.2 | 40.3 | 40.2 | 40.6 | 40.3 | 39.9 | 39.7 | 39.4 | 39.4 | 39.7 | 39.4 | 38.8 |
| Stone, clay, and glass products | 43.5 | 43.2 | 43.5 | 43.6 | 43.5 | 43.4 | 43.6 | 43.0 | 42.9 | 43.7 | 43.2 | 43.1 | 43.2 | 42.7 | 41.7 |
| Primary metal industries | 44.2 | 44.0 | 44.4 | 44.5 | 44.5 | 44.4 | 44.9 | 43.8 | 43.9 | 44.3 | 43.7 | 43.7 | 43.8 | 43.6 | 42.5 |
| Blast furnaces and basic steel products | 44.8 | 44.7 | 45.4 | 45.3 | 45.4 | 45.2 | 45.0 | 44.7 | 45.0 | 45.2 | 44.4 | 44.5 | 44.2 | 44.1 | 43.2 |
| Fabricated metal products | 42.2 | 42.2 | 42.1 | 42.4 | 42.4 | 42.5 | 43.0 | 42.3 | 42.4 | 42.6 | 42.1 | 42.0 | 42.1 | 41.7 | 40.6 |
| Industrial machinery and equipment | 42.2 | 42.3 | 42.2 | 42.3 | 42.3 | 42.3 | 42.9 | 42.2 | 42.5 | 42.6 | 42.2 | 42.1 | 42.1 | 42.0 | 41.2 |
| Electronic and other electrical equipment | 41.4 | 41.4 | 41.5 | 41.6 | 41.6 | 41.8 | 42.2 | 41.3 | 41.4 | 41.9 | 41.0 | 41.2 | 41.2 | 40.9 | 40.5 |
| Transportation equipment | 43.8 | 43.4 | 43.4 | 43.8 | 44.0 | 43.7 | 44.3 | 43.2 | 44.0 | 43.9 | 43.4 | 42.9 | 43.1 | 42.9 | 40.6 |
| Motor vehicles and equipment | 45.0 | 44.2 | 44.5 | 45.0 | 45.0 | 44.6 | 45.5 | 44.2 | 45.3 | 44.5 | 44.5 | 43.6 | 44.0 | 43.2 | 39.8 |
| Instruments and related products | 41.5 | 41.2 | 41.5 | 41.3 | 41.2 | 41.2 | 41.6 | 41.2 | 41.3 | 41.6 | 41.1 | 41.1 | 41.2 | 41.0 | 40.4 |
| Miscellaneous manufacturing | 39.8 | 39.4 | 39.7 | 39.5 | 39.5 | 39.4 | 39.8 | 39.3 | 39.4 | 39.7 | 39.4 | 39.3 | 39.3 | 39.1 | 38.7 |
| **Nondurable goods** | 40.9 | 40.7 | 40.9 | 40.9 | 41.0 | 40.9 | 41.3 | 40.6 | 40.7 | 40.7 | 40.6 | 40.6 | 40.6 | 40.4 | 40.0 |
| Overtime hours | 4.4 | 4.3 | 4.5 | 4.4 | 4.5 | 4.3 | 4.6 | 4.3 | 4.3 | 4.3 | 4.2 | 4.3 | 4.3 | 4.1 | 4.0 |
| Food and kindred products | 41.8 | 41.4 | 41.7 | 41.6 | 41.6 | 41.6 | 41.9 | 41.2 | 41.5 | 41.2 | 41.5 | 41.4 | 41.4 | 41.2 | 40.7 |
| Textile mill products | 40.9 | 41.1 | 41.2 | 41.1 | 41.7 | 41.6 | 41.9 | 41.1 | 41.1 | 41.2 | 40.7 | 41.0 | 40.9 | 40.5 | 40.5 |
| Apparel and other textile products | 37.5 | 37.2 | 37.5 | 37.6 | 37.7 | 37.8 | 38.0 | 37.1 | 37.0 | 37.3 | 36.9 | 36.8 | 36.9 | 36.6 | 36.4 |
| Paper and allied products | 43.5 | 42.8 | 43.3 | 43.3 | 43.5 | 43.2 | 43.6 | 42.8 | 42.8 | 42.4 | 42.4 | 42.7 | 42.5 | 42.6 | 41.8 |
| Printing and publishing | 38.2 | 38.1 | 38.3 | 38.3 | 38.3 | 38.2 | 38.5 | 38.0 | 38.2 | 38.1 | 37.9 | 38.1 | 38.2 | 38.0 | 37.7 |
| Chemicals and allied products | 43.0 | 42.8 | 43.0 | 42.9 | 42.7 | 42.6 | 42.9 | 42.7 | 42.9 | 43.4 | 43.0 | 42.9 | 43.0 | 42.6 | 42.4 |
| Rubber and miscellaneous plastics products | 41.7 | 41.3 | 41.5 | 41.6 | 41.6 | 41.5 | 42.1 | 41.3 | 41.4 | 41.4 | 41.2 | 41.1 | 41.1 | 41.0 | 40.0 |
| Leather and leather products | 37.8 | 37.8 | 37.4 | 37.8 | 38.1 | 38.0 | 38.9 | 38.2 | 37.8 | 37.1 | 37.1 | 37.4 | 37.4 | 38.1 | 37.2 |
| **SERVICE-PRODUCING** | 32.8 | 32.8 | 32.9 | 32.9 | 32.8 | 32.8 | 32.8 | 32.7 | 32.9 | 32.7 | 32.7 | 32.8 | 32.7 | 32.8 | 32.7 |
| **TRANSPORTATION AND PUBLIC UTILITIES** | 38.7 | 38.5 | 38.4 | 38.4 | 38.3 | 38.3 | 38.7 | 38.4 | 38.4 | 38.8 | 38.2 | 38.5 | 38.6 | 38.5 | 38.7 |
| **WHOLESALE TRADE** | 38.3 | 38.5 | 38.5 | 38.6 | 38.5 | 38.6 | 38.6 | 38.6 | 38.6 | 38.5 | 38.3 | 38.6 | 38.5 | 38.6 | 38.3 |
| **RETAIL TRADE** | 29.0 | 28.9 | 29.1 | 29.1 | 29.1 | 29.0 | 28.8 | 28.8 | 29.0 | 28.8 | 28.8 | 28.8 | 28.8 | 28.9 | 28.6 |

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

## 14. Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry, seasonally adjusted

| Industry | Annual average | | 1999 | 2000 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000[P] | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov.[P] | Dec.[P] |
| **PRIVATE SECTOR (in current dollars)** | $ 13.24 | $ 13.74 | $13.44 | $13.49 | $13.54 | $13.58 | $13.64 | $13.66 | $13.70 | $13.75 | $13.80 | $13.83 | $13.88 | $13.96 | $14.02 |
| **Goods-producing** | 14.84 | 15.40 | 15.05 | 15.13 | 15.20 | 15.25 | 15.30 | 15.29 | 15.34 | 15.40 | 15.45 | 15.46 | 15.57 | 15.66 | 15.64 |
| Mining | 17.09 | 17.14 | 17.04 | 17.09 | 17.14 | 17.27 | 17.26 | 17.25 | 17.24 | 17.23 | 17.05 | 17.09 | 17.08 | 17.13 | 17.10 |
| Construction | 17.18 | 17.86 | 17.44 | 17.50 | 17.60 | 17.67 | 17.78 | 17.75 | 17.77 | 17.90 | 17.93 | 17.96 | 18.00 | 18.20 | 18.15 |
| Manufacturing | 13.91 | 14.38 | 14.10 | 14.15 | 14.21 | 14.23 | 14.28 | 14.27 | 14.36 | 14.39 | 14.43 | 14.43 | 14.56 | 14.63 | 14.61 |
| Excluding overtime | 13.18 | 13.64 | 13.36 | 13.41 | 13.45 | 13.47 | 13.49 | 13.53 | 13.60 | 13.64 | 13.69 | 13.73 | 13.81 | 13.90 | 13.93 |
| **Service-producing** | 12.73 | 13.22 | 12.93 | 12.97 | 13.01 | 13.05 | 13.11 | 13.15 | 13.19 | 13.23 | 13.28 | 13.33 | 13.36 | 13.44 | 13.53 |
| Transportation and public utilities | 15.69 | 16.22 | 15.94 | 15.92 | 16.00 | 16.04 | 16.12 | 16.22 | 16.28 | 16.17 | 16.26 | 16.30 | 16.38 | 16.42 | 16.50 |
| Wholesale trade | 14.58 | 15.18 | 14.83 | 14.90 | 14.89 | 14.90 | 15.03 | 15.02 | 15.16 | 15.22 | 15.24 | 15.32 | 15.36 | 15.46 | 15.56 |
| Retail trade | 9.08 | 9.45 | 9.25 | 9.26 | 9.32 | 9.35 | 9.39 | 9.39 | 9.43 | 9.45 | 9.49 | 9.54 | 9.56 | 9.60 | 9.65 |
| Finance, insurance, and real estate | 14.62 | 15.07 | 14.78 | 14.86 | 14.87 | 14.95 | 14.98 | 15.01 | 15.05 | 15.03 | 15.12 | 15.19 | 15.18 | 15.27 | 15.35 |
| Services | 13.36 | 13.88 | 13.57 | 13.61 | 13.66 | 13.69 | 13.74 | 13.79 | 13.82 | 13.89 | 13.94 | 13.97 | 14.00 | 14.12 | 14.20 |
| **PRIVATE SECTOR (in constant (1982) dollars)** | 7.86 | 7.88 | 7.87 | 7.88 | 7.87 | 7.83 | 7.87 | 7.87 | 7.85 | 7.86 | 7.90 | 7.87 | 7.89 | 7.92 | 7.94 |

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

## 15. Average hourly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry

| Industry | 1999 | 2000[P] | 1999 Dec. | 2000 Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov.[P] | Dec.[P] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **PRIVATE SECTOR** | $13.24 | $13.74 | $13.46 | $13.58 | $13.58 | $13.59 | $13.69 | $13.64 | $13.62 | $13.68 | $13.67 | $13.88 | $13.96 | $13.98 | $14.03 |
| **MINING** | 17.09 | 17.14 | 17.19 | 17.30 | 17.20 | 17.28 | 17.29 | 17.19 | 17.09 | 17.13 | 16.94 | 17.05 | 17.02 | 17.06 | 17.14 |
| **CONSTRUCTION** | 17.18 | 17.86 | 17.47 | 17.39 | 17.42 | 17.54 | 17.66 | 17.71 | 17.74 | 17.95 | 18.04 | 18.16 | 18.21 | 18.22 | 17.86 |
| **MANUFACTURING** | 13.91 | 14.38 | 14.20 | 14.19 | 14.19 | 14.22 | 14.28 | 14.27 | 14.34 | 14.37 | 14.37 | 14.50 | 14.53 | 14.69 | 14.38 |
| **Durable goods** | 14.40 | 14.93 | 14.73 | 14.72 | 14.73 | 14.76 | 14.82 | 14.80 | 14.90 | 14.86 | 14.93 | 15.07 | 15.13 | 15.22 | 15.26 |
| Lumber and wood products | 11.47 | 11.80 | 11.64 | 11.67 | 11.63 | 11.62 | 11.73 | 11.74 | 11.82 | 11.87 | 11.83 | 11.88 | 11.91 | 11.89 | 11.96 |
| Furniture and fixtures | 11.23 | 11.75 | 11.47 | 11.47 | 11.51 | 11.59 | 11.64 | 11.69 | 11.73 | 11.80 | 11.82 | 11.88 | 11.92 | 11.94 | 12.02 |
| Stone, clay, and glass products | 13.87 | 14.32 | 13.97 | 13.94 | 13.96 | 14.03 | 14.23 | 14.28 | 14.36 | 14.42 | 14.41 | 14.53 | 14.57 | 14.51 | 14.51 |
| Primary metal industries | 15.83 | 16.50 | 16.17 | 16.20 | 16.28 | 16.34 | 16.51 | 16.40 | 16.52 | 16.68 | 16.57 | 16.65 | 16.55 | 16.64 | 16.66 |
| Blast furnaces and basic steel products | 18.81 | 19.46 | 19.09 | 19.16 | 19.32 | 19.49 | 19.72 | 19.46 | 19.62 | 19.78 | 19.56 | 19.58 | 19.28 | 19.27 | 19.26 |
| Fabricated metal products | 13.48 | 13.87 | 13.72 | 13.71 | 13.67 | 13.69 | 13.75 | 13.75 | 13.82 | 13.82 | 13.90 | 14.02 | 14.03 | 14.08 | 14.13 |
| Industrial machinery and equipment | 15.02 | 17.63 | 15.36 | 15.39 | 15.40 | 15.43 | 15.42 | 15.45 | 15.51 | 15.61 | 15.66 | 15.84 | 15.88 | 15.99 | 16.04 |
| Electronic and other electrical equipment | 13.46 | 13.80 | 13.73 | 13.77 | 13.72 | 13.70 | 13.70 | 13.65 | 13.72 | 13.79 | 13.81 | 13.84 | 13.88 | 13.93 | 14.03 |
| Transportation equipment | 18.04 | 19.04 | 18.72 | 18.57 | 18.58 | 18.70 | 18.82 | 18.79 | 19.01 | 18.66 | 19.02 | 19.30 | 19.52 | 19.82 | 19.72 |
| Motor vehicles and equipment | 18.41 | 19.51 | 19.22 | 18.99 | 19.03 | 19.17 | 19.36 | 19.35 | 19.62 | 19.07 | 19.58 | 19.87 | 20.19 | 20.57 | 20.41 |
| Instruments and related products | 14.17 | 14.62 | 14.41 | 14.38 | 14.41 | 14.40 | 14.40 | 14.44 | 14.49 | 14.65 | 14.65 | 14.80 | 14.91 | 15.06 | 14.62 |
| Miscellaneous manufacturing | 11.30 | 11.65 | 11.54 | 11.52 | 11.53 | 11.55 | 11.58 | 11.59 | 11.60 | 11.65 | 11.60 | 11.70 | 11.77 | 11.78 | 11.91 |
| **Nondurable goods** | 13.16 | 13.53 | 13.39 | 13.37 | 13.36 | 13.37 | 13.45 | 13.43 | 13.48 | 13.61 | 13.52 | 13.63 | 13.63 | 13.71 | 13.82 |
| Food and kindred products | 12.09 | 12.41 | 12.28 | 12.23 | 12.23 | 12.27 | 12.36 | 12.36 | 12.39 | 12.46 | 12.40 | 12.50 | 12.44 | 12.57 | 12.67 |
| Tobacco products | 19.07 | 19.07 | 18.03 | 17.21 | 17.48 | 19.10 | 19.71 | 20.40 | 20.87 | 21.08 | 20.95 | 18.51 | 17.98 | 18.40 | 18.55 |
| Textile mill products | 10.71 | 10.95 | 10.84 | 10.84 | 10.85 | 10.86 | 10.94 | 10.91 | 10.91 | 10.97 | 10.97 | 11.05 | 11.01 | 11.04 | 11.05 |
| Apparel and other textile products | 8.86 | 9.09 | 9.04 | 9.03 | 9.03 | 9.05 | 9.05 | 9.05 | 9.07 | 9.06 | 9.09 | 9.16 | 9.16 | 9.16 | 9.23 |
| Paper and allied products | 15.94 | 16.21 | 16.12 | 16.02 | 15.99 | 16.00 | 16.15 | 16.12 | 16.18 | 16.29 | 16.18 | 16.31 | 16.36 | 16.36 | 16.56 |
| Printing and publishing | 13.84 | 14.30 | 14.12 | 14.10 | 14.13 | 14.18 | 14.20 | 14.15 | 14.15 | 14.29 | 14.29 | 14.48 | 14.47 | 14.52 | 14.61 |
| Chemicals and allied products | 17.38 | 17.93 | 17.67 | 17.70 | 17.67 | 17.63 | 17.77 | 17.80 | 17.91 | 18.17 | 17.94 | 18.07 | 18.09 | 18.17 | 18.30 |
| Petroleum and coal products | 21.39 | 21.46 | 21.76 | 21.62 | 22.03 | 22.24 | 21.77 | 21.34 | 21.19 | 21.24 | 21.01 | 21.14 | 21.11 | 21.31 | 21.54 |
| Rubber and miscellaneous plastics products | 12.36 | 12.77 | 12.57 | 12.61 | 12.57 | 12.58 | 12.67 | 12.65 | 12.72 | 12.84 | 12.81 | 12.87 | 12.89 | 12.95 | 13.06 |
| Leather and leather products | 9.77 | 10.12 | 10.01 | 10.08 | 9.96 | 10.01 | 10.13 | 10.05 | 10.08 | 10.08 | 10.15 | 10.25 | 10.21 | 10.18 | 10.26 |
| **TRANSPORTATION AND PUBLIC UTILITIES** | 15.69 | 16.22 | 15.96 | 15.98 | 16.05 | 16.02 | 16.15 | 16.13 | 16.17 | 16.19 | 16.22 | 16.31 | 16.38 | 16.43 | 16.52 |
| **WHOLESALE TRADE** | 14.58 | 15.18 | 14.85 | 14.99 | 14.91 | 14.83 | 15.14 | 14.99 | 15.04 | 15.25 | 15.17 | 15.32 | 15.45 | 15.46 | 15.58 |
| **RETAIL TRADE** | 9.08 | 9.45 | 9.26 | 9.33 | 9.35 | 9.37 | 9.42 | 9.39 | 9.38 | 9.38 | 9.40 | 9.57 | 9.58 | 9.60 | 9.64 |
| **FINANCE, INSURANCE, AND REAL ESTATE** | 14.62 | 15.07 | 14.76 | 14.99 | 14.93 | 14.97 | 15.12 | 15.02 | 14.93 | 15.01 | 14.99 | 15.12 | 15.24 | 15.25 | 15.33 |
| **SERVICES** | 13.36 | 13.88 | 13.65 | 13.78 | 13.77 | 13.77 | 13.83 | 13.76 | 13.68 | 13.74 | 13.70 | 13.96 | 14.07 | 14.17 | 14.29 |

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

## 16. Average weekly earnings of production or nonsupervisory workers on private nonfarm payrolls, by industry

| Industry | Annual average | | 1999 | 2000 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000[P] | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov.[P] | Dec.[P] |
| **PRIVATE SECTOR** | | | | | | | | | | | | | | | |
| Current dollars | $456.78 | $474.03 | $465.72 | $467.15 | $464.44 | $464.78 | $473.67 | $467.85 | $471.25 | $477.43 | $474.35 | $478.86 | $484.41 | $479.51 | $479.48 |
| Seasonally adjusted | – | – | 463.68 | 465.41 | 468.48 | 468.51 | 471.94 | 469.90 | 472.65 | 473.00 | 473.34 | 475.75 | 477.47 | 478.83 | 477.74 |
| Constant (1982) dollars | 271.25 | – | 273.31 | 273.35 | 270.34 | 268.19 | 273.17 | 269.50 | 269.90 | 273.13 | 271.52 | 272.23 | 275.08 | 271.83 | 272.12 |
| **MINING** | 748.54 | 769.59 | 763.24 | 766.39 | 758.52 | 758.59 | 776.32 | 763.24 | 770.76 | 775.99 | 762.30 | 784.30 | 784.62 | 769.41 | 765.78 |
| **CONSTRUCTION** | 671.74 | 701.90 | 677.84 | 664.04 | 674.15 | 680.55 | 692.27 | 701.32 | 702.50 | 723.39 | 725.21 | 726.40 | 730.22 | 699.16 | 685.76 |
| **MANUFACTURING** | | | | | | | | | | | | | | | |
| Current dollars | 580.05 | 596.77 | 603.50 | 590.30 | 588.89 | 590.13 | 595.48 | 590.78 | 597.98 | 590.61 | 594.92 | 604.65 | 604.45 | 608.19 | 607.52 |
| Constant (1982) dollars | 344.45 | – | 354.17 | 345.41 | 342.78 | 340.53 | 343.41 | 340.31 | 342.49 | 337.88 | 340.54 | 343.75 | 343.24 | 344.78 | 344.79 |
| **Durable goods** | 607.68 | 627.06 | 634.86 | 621.18 | 620.13 | 622.87 | 628.37 | 623.08 | 630.27 | 618.18 | 625.57 | 635.95 | 635.46 | 639.24 | 635.23 |
| Lumber and wood products | 472.56 | 480.26 | 480.73 | 474.97 | 469.85 | 470.61 | 482.10 | 480.17 | 485.80 | 483.11 | 483.85 | 485.89 | 487.12 | 482.73 | 479.60 |
| Furniture and fixtures | 452.57 | 468.83 | 471.42 | 459.95 | 458.10 | 462.44 | 464.44 | 465.26 | 468.03 | 462.56 | 470.44 | 477.58 | 475.61 | 474.81 | 483.21 |
| Stone, clay, and glass products | 603.35 | 618.19 | 604.90 | 591.06 | 591.90 | 596.28 | 614.74 | 621.18 | 624.66 | 631.60 | 631.16 | 637.87 | 637.73 | 623.50 | 606.29 |
| Primary metal industries | 699.69 | 726.44 | 732.50 | 722.52 | 722.83 | 723.86 | 734.70 | 721.60 | 728.53 | 725.58 | 720.80 | 730.94 | 721.58 | 733.04 | 725.65 |
| Blast furnaces and basic steel products | 842.69 | 870.76 | 878.14 | 867.95 | 875.20 | 875.10 | 891.34 | 873.75 | 882.90 | 888.12 | 866.51 | 871.31 | 844.46 | 856.48 | 850.16 |
| Fabricated metal products | 568.86 | 585.31 | 594.08 | 579.93 | 576.87 | 577.72 | 583.00 | 581.63 | 587.35 | 576.29 | 585.19 | 594.45 | 593.47 | 593.19 | 588.64 |
| Industrial machinery and equipment | 633.84 | 659.59 | 663.55 | 654.08 | 652.96 | 654.23 | 655.35 | 653.54 | 659.18 | 654.06 | 657.72 | 666.86 | 668.55 | 670.65 | 677.65 |
| Electronic and other electrical equipment | 557.24 | 571.32 | 582.15 | 572.83 | 569.38 | 571.29 | 569.92 | 561.02 | 569.38 | 566.77 | 566.21 | 575.74 | 574.63 | 578.10 | 582.25 |
| Transportation equipment | 790.15 | 826.34 | 838.66 | 811.51 | 815.66 | 819.06 | 829.96 | 817.37 | 836.44 | 781.85 | 819.76 | 839.55 | 847.17 | 859.32 | 835.85 |
| Motor vehicles and equipment | 828.45 | 865.88 | 887.96 | 850.75 | 856.35 | 860.73 | 880.88 | 866.88 | 888.79 | 800.94 | 861.52 | 880.24 | 890.38 | 897.60 | 860.16 |
| Instruments and related products | 588.06 | 602.34 | 612.43 | 595.33 | 595.13 | 593.28 | 594.72 | 592.04 | 596.99 | 600.65 | 600.65 | 608.28 | 610.34 | 616.86 | 620.88 |
| Miscellaneous manufacturing | 449.74 | 458.62 | 466.22 | 450.43 | 453.13 | 456.23 | 456.25 | 454.33 | 458.20 | 453.19 | 458.20 | 464.49 | 467.27 | 465.31 | 466.89 |
| **Nondurable goods** | 538.24 | 550.67 | 557.02 | 544.16 | 542.42 | 542.82 | 548.76 | 543.92 | 549.98 | 549.84 | 548.91 | 558.83 | 556.10 | 560.33 | 564.67 |
| Food and kindred products | 505.36 | 513.77 | 520.67 | 505.10 | 500.21 | 501.84 | 506.76 | 506.76 | 512.95 | 513.35 | 517.08 | 527.50 | 519.99 | 524.17 | 529.59 |
| Tobacco products | 762.80 | 760.49 | 793.32 | 672.91 | 685.22 | 741.08 | 782.49 | 811.92 | 836.89 | 832.66 | 842.19 | 764.46 | 719.20 | 733.51 | 750.92 |
| Textile mill products | 438.04 | 451.14 | 453.11 | 443.36 | 448.11 | 450.69 | 456.20 | 448.40 | 451.67 | 450.29 | 448.67 | 454.16 | 452.51 | 452.64 | 454.85 |
| Apparel and other textile products | 332.25 | 338.15 | 343.52 | 335.92 | 339.53 | 342.09 | 341.19 | 336.66 | 339.22 | 333.41 | 336.33 | 338.00 | 338.92 | 337.64 | 340.96 |
| Paper and allied products | 693.39 | 693.79 | 712.50 | 695.27 | 687.57 | 686.40 | 696.07 | 686.71 | 692.50 | 687.44 | 681.18 | 701.33 | 700.21 | 705.55 | 710.10 |
| Printing and publishing | 528.69 | 544.83 | 550.68 | 534.39 | 536.94 | 540.26 | 542.44 | 533.46 | 534.87 | 540.16 | 543.02 | 557.48 | 555.65 | 560.86 | 561.10 |
| Chemicals and allied products | 747.34 | 766.98 | 772.18 | 757.56 | 750.98 | 749.28 | 757.00 | 756.50 | 768.34 | 779.49 | 769.63 | 778.82 | 781.49 | 781.40 | 783.46 |
| Petroleum and coal products | 921.91 | 951.56 | 937.86 | 933.98 | 956.10 | 969.66 | 966.59 | 919.75 | 923.88 | 955.80 | 926.54 | 957.64 | 964.73 | 958.95 | 972.67 |
| Rubber and miscellaneous plastics products | 515.41 | 527.40 | 532.97 | 523.32 | 520.40 | 520.81 | 528.34 | 523.71 | 529.15 | 522.59 | 525.21 | 532.82 | 529.78 | 533.95 | 536.20 |
| Leather and leather products | 369.31 | 382.54 | 375.75 | 372.96 | 375.49 | 379.38 | 388.99 | 384.92 | 387.07 | 365.90 | 383.67 | 388.48 | 383.90 | 390.14 | 392.31 |
| **TRANSPORTATION AND PUBLIC UTILITIES** | 607.20 | 624.09 | 612.86 | 612.03 | 611.51 | 608.76 | 626.62 | 616.17 | 622.55 | 634.65 | 627.71 | 631.20 | 638.82 | 632.56 | 636.51 |
| **WHOLESALE TRADE** | 558.41 | 584.43 | 570.24 | 578.61 | 568.07 | 566.51 | 588.95 | 575.62 | 579.04 | 591.70 | 581.01 | 589.82 | 597.92 | 594.44 | 599.42 |
| **RETAIL TRADE** | 263.32 | 273.11 | 271.32 | 265.91 | 266.48 | 267.98 | 272.24 | 270.43 | 274.83 | 279.52 | 277.30 | 275.62 | 276.86 | 274.56 | 277.63 |
| **FINANCE, INSURANCE, AND REAL ESTATE** | 529.24 | 545.90 | 534.31 | 551.63 | 538.97 | 537.42 | 554.90 | 539.22 | 540.47 | 550.87 | 539.64 | 545.83 | 557.78 | 548.19 | 555.68 |
| **SERVICES** | 435.54 | 453.55 | 444.99 | 450.61 | 448.90 | 447.53 | 453.62 | 445.82 | 447.34 | 453.42 | 450.73 | 453.70 | 461.50 | 461.62 | 463.45 |

[P] = preliminary.

NOTE: See "Notes on the data" for a description of the most recent benchmark revision. Dash indicates data not available.

## 17. Diffusion indexes of employment change, seasonally adjusted

[In percent]

| Timespan and year | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov | Dec. |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Private nonfarm payrolls, 356 industries | | | | | | | | | | | |
| Over 1-month span: | | | | | | | | | | | | |
| 1998 | 63.2 | 56.6 | 60.5 | 58.7 | 58.3 | 59.7 | 53.9 | 58.1 | 56.2 | 53.8 | 59.0 | 57.4 |
| 1999 | 54.1 | 58.8 | 53.9 | 59.6 | 52.8 | 57.9 | 58.8 | 53.8 | 57.3 | 60.7 | 60.8 | 59.0 |
| 2000 | 60.8 | 54.1 | 60.7 | 56.5 | 45.9 | 56.2 | 58.7 | 51.4 | 53.7 | 55.2 | 50.6 | 53.8 |
| Over 3-month span: | | | | | | | | | | | | |
| 1998 | 64.3 | 66.6 | 63.2 | 66.3 | 63.6 | 58.0 | 57.4 | 57.9 | 59.7 | 58.1 | 58.6 | 59.4 |
| 1999 | 58.3 | 57.3 | 58.4 | 54.4 | 57.3 | 58.8 | 58.1 | 60.7 | 59.6 | 63.5 | 64.3 | 63.1 |
| 2000 | 61.0 | 62.6 | 61.9 | 57.4 | 56.7 | 58.3 | 57.9 | 58.4 | 50.8 | 52.4 | 53.7 | – |
| Over 6-month span: | | | | | | | | | | | | |
| 1998 | 69.8 | 67.4 | 65.2 | 61.8 | 62.9 | 61.4 | 59.0 | 58.4 | 57.4 | 59.7 | 59.3 | 59.1 |
| 1999 | 60.0 | 58.0 | 57.6 | 58.6 | 54.4 | 59.7 | 60.4 | 62.1 | 64.0 | 62.8 | 65.2 | 64.6 |
| 2000 | 65.6 | 60.8 | 61.0 | 61.9 | 59.3 | 56.0 | 54.4 | 56.9 | 54.8 | – | – | – |
| Over 12-month span: | | | | | | | | | | | | |
| 1998 | 69.7 | 67.3 | 67.3 | 65.9 | 63.9 | 62.5 | 61.5 | 62.1 | 61.0 | 59.8 | 59.8 | 58.1 |
| 1999 | 60.3 | 58.3 | 57.6 | 59.4 | 59.6 | 60.5 | 61.9 | 61.0 | 62.6 | 62.9 | 62.5 | 63.2 |
| 2000 | 64.9 | 63.8 | 60.8 | 59.8 | 58.6 | 56.0 | – | – | – | – | – | – |
| | Manufacturing payrolls, 139 industries | | | | | | | | | | | |
| Over 1-month span: | | | | | | | | | | | | |
| 1998 | 57.9 | 50.7 | 53.6 | 50.7 | 47.1 | 50.0 | 37.8 | 50.0 | 45.7 | 39.9 | 41.7 | 43.9 |
| 1999 | 45.0 | 41.0 | 42.8 | 46.4 | 40.3 | 46.4 | 54.7 | 38.1 | 46.4 | 51.8 | 51.4 | 50.4 |
| 2000 | 52.2 | 47.8 | 51.1 | 51.1 | 45.7 | 51.1 | 57.6 | 36.3 | 38.8 | 45.7 | 43.5 | 42.4 |
| Over 3-month span: | | | | | | | | | | | | |
| 1998 | 56.8 | 56.8 | 52.2 | 52.2 | 48.6 | 41.4 | 39.2 | 40.3 | 43.2 | 37.1 | 36.7 | 40.6 |
| 1999 | 36.7 | 37.1 | 37.1 | 34.5 | 37.8 | 43.5 | 39.9 | 45.0 | 42.1 | 50.4 | 51.1 | 50.7 |
| 2000 | 47.8 | 52.5 | 49.3 | 48.9 | 49.6 | 53.6 | 44.2 | 36.3 | 28.8 | 35.6 | 37.1 | – |
| Over 6-month span: | | | | | | | | | | | | |
| 1998 | 60.1 | 54.3 | 50.4 | 39.9 | 43.5 | 42.1 | 38.8 | 36.7 | 36.0 | 39.9 | 34.5 | 32.7 |
| 1999 | 35.6 | 33.5 | 33.5 | 37.1 | 32.7 | 38.8 | 41.0 | 45.7 | 48.2 | 43.2 | 48.6 | 51.1 |
| 2000 | 51.4 | 47.5 | 50.4 | 53.6 | 45.0 | 38.1 | 33.5 | 36.0 | 31.7 | – | – | – |
| Over 12-month span: | | | | | | | | | | | | |
| 1998 | 55.0 | 51.8 | 51.8 | 46.8 | 40.6 | 39.9 | 37.8 | 38.1 | 37.1 | 36.0 | 34.2 | 33.5 |
| 1999 | 37.4 | 32.4 | 31.7 | 35.3 | 36.0 | 37.1 | 38.8 | 39.6 | 42.4 | 42.4 | 42.4 | 46.0 |
| 2000 | 47.8 | 44.6 | 39.2 | 39.2 | 35.3 | 30.9 | – | – | – | – | – | – |

– Data not available.

NOTE: Figures are the percent of industries with employment increasing plus one-half of the industries with unchanged employment, where 50 percent indicates an equal balance between industries with increasing and decreasing employment. Data for the 2 most recent months shown in each span are preliminary. See the "Definitions" in this section. See "Notes on the data" for a description of the most recent benchmark revision.

## 18. Annual data: Employment status of the population

[Numbers in thousands]

| Employment status | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|---|---|
| Civilian noninstitutional population | 190,925 | 192,805 | 194,838 | 196,814 | 198,584 | 200,591 | 203,133 | 205,220 | 207,753 | 209,699 |
| Civilian labor force | 126,346 | 128,105 | 129,200 | 131,056 | 132,304 | 133,943 | 136,297 | 137,673 | 139,368 | 140,863 |
| Labor force participation rate | 66.2 | 66.4 | 66.3 | 66.6 | 66.6 | 66.8 | 67.1 | 67.1 | 67.1 | 67.2 |
| Employed | 117,718 | 118,492 | 120,259 | 123,060 | 124,900 | 126,708 | 129,558 | 131,463 | 133,488 | 135,208 |
| Employment-population ratio | 61.7 | 61.5 | 61.7 | 62.5 | 62.9 | 63.2 | 63.8 | 64.1 | 64.3 | 64.5 |
| Agriculture | 3,269 | 3,247 | 3,115 | 3,409 | 3,440 | 3,443 | 3,399 | 3,378 | 3,281 | 3,305 |
| Nonagricultural industries | 114,499 | 115,245 | 117,144 | 119,651 | 121,460 | 123,264 | 126,159 | 128,085 | 130,207 | 131,903 |
| Unemployed | 8,628 | 9,613 | 8,940 | 7,996 | 7,404 | 7,236 | 6,739 | 6,210 | 5,880 | 5,655 |
| Unemployment rate | 6.8 | 7.5 | 6.9 | 6.1 | 5.6 | 5.4 | 4.9 | 4.5 | 4.2 | 4.0 |
| Not in the labor force | 64,578 | 64,700 | 65,638 | 65,758 | 66,280 | 66,647 | 66,837 | 67,547 | 68,385 | 68,836 |

## 19. Annual data: Employment levels by industry

[In thousands]

| Industry | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| Total employment | 108,249 | 108,601 | 110,713 | 114,163 | 117,191 | 119,608 | 122,690 | 125,865 | 128,786 | 131,417 |
| Private sector | 89,847 | 89,956 | 91,872 | 95,036 | 97,885 | 100,189 | 103,133 | 106,042 | 108,616 | 110,847 |
| Goods-producing | 23,745 | 23,231 | 23,352 | 23,908 | 24,265 | 24,493 | 24,962 | 25,414 | 25,482 | 25,661 |
| Mining | 689 | 635 | 610 | 601 | 581 | 580 | 596 | 590 | 535 | 538 |
| Construction | 4,650 | 4,492 | 4,668 | 4,986 | 5,160 | 5,418 | 5,691 | 6,020 | 6,404 | 6,687 |
| Manufacturing | 18,406 | 18,104 | 18,075 | 18,321 | 18,524 | 18,495 | 18,675 | 18,805 | 18,543 | 18,437 |
| Service-producing | 84,504 | 85,370 | 87,361 | 90,256 | 92,925 | 95,115 | 97,727 | 100,451 | 103,304 | 105,756 |
| Transportation and public utilities | 5,755 | 5,718 | 5,811 | 5,984 | 6,132 | 6,253 | 6,408 | 6,611 | 6,826 | 6,993 |
| Wholesale trade | 6,081 | 5,997 | 5,981 | 6,162 | 6,378 | 6,482 | 6,648 | 6,800 | 6,924 | 7,054 |
| Retail trade | 19,284 | 19,356 | 19,773 | 20,507 | 21,187 | 21,597 | 21,966 | 22,295 | 22,788 | 23,137 |
| Finance, insurance, and real estate | 6,646 | 6,602 | 6,757 | 6,896 | 6,806 | 6,911 | 7,109 | 7,389 | 7,569 | 7,618 |
| Services | 28,336 | 29,052 | 30,197 | 31,579 | 33,117 | 34,454 | 36,040 | 37,533 | 39,027 | 40,384 |
| Government | 18,402 | 18,645 | 18,841 | 19,128 | 19,305 | 19,419 | 19,557 | 19,823 | 20,170 | 20,570 |
| Federal | 2,966 | 2,969 | 2,915 | 2,870 | 2,822 | 2,757 | 2,699 | 2,686 | 2,669 | 2,778 |
| State | 4,355 | 4,408 | 4,488 | 4,576 | 4,635 | 4,606 | 4,582 | 4,612 | 4,695 | 4,746 |
| Local | 11,081 | 11,267 | 11,438 | 11,682 | 11,849 | 12,056 | 12,276 | 12,525 | 12,806 | 13,047 |

NOTE: See "Notes on the data" for a description of the most recent benchmark revision.

## 20. Annual data: Average hours and earnings of production or nonsupervisory workers on nonfarm payrolls, by industry

| Industry | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000[p] |
|---|---|---|---|---|---|---|---|---|---|---|
| **Private sector:** | | | | | | | | | | |
| Average weekly hours | 34.3 | 34.4 | 34.5 | 34.7 | 34.5 | 34.4 | 34.6 | 34.6 | 34.5 | 34.5 |
| Average hourly earnings (in dollars) | 10.32 | 10.57 | 10.83 | 11.12 | 11.43 | 11.82 | 12.28 | 12.78 | 13.24 | 13.74 |
| Average weekly earnings (in dollars) | 353.98 | 363.61 | 373.64 | 385.86 | 394.34 | 406.61 | 424.89 | 442.19 | 456.78 | 474.03 |
| **Mining:** | | | | | | | | | | |
| Average weekly hours | 44.4 | 43.9 | 44.3 | 44.8 | 44.7 | 45.3 | 45.4 | 43.9 | 43.8 | 44.9 |
| Average hourly earnings (in dollars) | 14.19 | 14.54 | 14.60 | 14.88 | 15.30 | 15.62 | 16.15 | 16.91 | 17.09 | 17.14 |
| Average weekly earnings (in dollars) | 630.04 | 638.31 | 646.78 | 666.62 | 683.91 | 707.59 | 733.21 | 742.35 | 748.54 | 769.59 |
| **Construction:** | | | | | | | | | | |
| Average weekly hours | 38.1 | 38.0 | 38.5 | 38.9 | 38.9 | 39.0 | 39.0 | 38.9 | 39.1 | 339.3 |
| Average hourly earnings (in dollars) | 14.00 | 14.15 | 14.38 | 14.73 | 15.09 | 15.47 | 16.04 | 16.61 | 17.18 | 17.86 |
| Average weekly earnings (in dollars) | 533.40 | 537.70 | 553.63 | 573.00 | 587.00 | 603.33 | 625.56 | 646.13 | 671.74 | 701.90 |
| **Manufacturing:** | | | | | | | | | | |
| Average weekly hours | 40.7 | 41.0 | 41.4 | 42.0 | 41.6 | 41.6 | 42.0 | 41.7 | 41.7 | 41.5 |
| Average hourly earnings (in dollars) | 11.18 | 11.46 | 11.74 | 12.07 | 12.37 | 12.77 | 13.17 | 13.49 | 13.91 | 14.38 |
| Average weekly earnings (in dollars) | 455.03 | 469.86 | 486.04 | 506.94 | 514.59 | 531.23 | 553.14 | 562.53 | 580.05 | 596.77 |
| **Transportation and public utilities:** | | | | | | | | | | |
| Average weekly hours | 38.1 | 38.3 | 39.3 | 39.7 | 39.4 | 39.6 | 39.7 | 39.5 | 38.7 | 38.5 |
| Average hourly earnings (in dollars) | 13.20 | 13.43 | 13.55 | 13.78 | 14.13 | 14.45 | 14.92 | 15.31 | 15.69 | 16.22 |
| Average weekly earnings (in dollars) | 502.92 | 514.37 | 532.52 | 547.07 | 556.72 | 572.22 | 592.32 | 604.75 | 607.20 | 624.47 |
| **Wholesale trade:** | | | | | | | | | | |
| Average weekly hours | 38.1 | 38.2 | 38.2 | 38.4 | 38.3 | 38.3 | 38.4 | 38.3 | 38.3 | 38.5 |
| Average hourly earnings (in dollars) | 11.15 | 11.39 | 11.74 | 12.06 | 12.43 | 12.87 | 13.45 | 14.07 | 14.58 | 15.18 |
| Average weekly earnings (in dollars) | 424.82 | 435.10 | 448.47 | 463.10 | 476.07 | 492.92 | 516.48 | 538.88 | 558.41 | 584.43 |
| **Retail trade:** | | | | | | | | | | |
| Average weekly hours | 28.6 | 28.8 | 28.8 | 28.9 | 28.8 | 28.8 | 28.9 | 29.0 | 29.0 | 28.9 |
| Average hourly earnings (in dollars) | 6.94 | 7.12 | 7.29 | 7.49 | 7.69 | 7.99 | 8.33 | 8.74 | 9.08 | 9.45 |
| Average weekly earnings (in dollars) | 198.48 | 205.06 | 209.95 | 216.46 | 221.47 | 230.11 | 240.74 | 253.46 | 263.32 | 273.11 |
| **Finance, insurance, and real estate:** | | | | | | | | | | |
| Average weekly hours | 35.7 | 35.8 | 35.8 | 35.8 | 35.9 | 35.9 | 36.1 | 36.4 | 36.2 | 36.3 |
| Average hourly earnings (in dollars) | 10.39 | 10.82 | 11.35 | 11.83 | 12.32 | 12.80 | 13.34 | 14.07 | 14.62 | 15.07 |
| Average weekly earnings (in dollars) | 370.92 | 387.36 | 406.33 | 423.51 | 442.29 | 459.52 | 481.57 | 512.15 | 529.24 | 547.04 |
| **Services:** | | | | | | | | | | |
| Average weekly hours | 32.4 | 32.5 | 32.5 | 32.5 | 32.4 | 32.4 | 32.6 | 32.6 | 32.6 | 32.7 |
| Average hourly earnings (in dollars) | 10.23 | 10.54 | 10.78 | 11.04 | 11.39 | 11.79 | 12.28 | 12.84 | 13.36 | 13.88 |
| Average weekly earnings (in dollars) | 331.45 | 342.55 | 350.35 | 358.80 | 369.04 | 382.00 | 400.33 | 418.58 | 435.54 | 453.88 |

## 21. Employment Cost Index, compensation,[1] by occupation and industry group

[June 1989 = 100]

| Series | 1998 | | 1999 | | | | 2000 | | | Percent change | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sept. | Dec. | Mar. | June | Sept. | Dec. | Mar. | June | Sept. | 3 months ended | 12 months ended |
| | | | | | | | | | | Sept. 2000 | |
| **Civilian workers**[2] | 139.0 | 139.8 | 140.4 | 141.8 | 143.3 | 144.6 | 146.5 | 148.0 | 149.5 | 1.0 | 4.3 |
| Workers, by occupational group: | | | | | | | | | | | |
| White-collar workers | 140.6 | 141.4 | 141.9 | 143.3 | 145.0 | 146.3 | 148.4 | 149.9 | 151.5 | 1.1 | 4.5 |
| Professional specialty and technical | 140.0 | 141.0 | 141.3 | 142.2 | 143.9 | 145.3 | 146.7 | 148.3 | 150.0 | 1.1 | 4.2 |
| Executive, adminitrative, and managerial | 141.7 | 141.8 | 143.5 | 145.4 | 147.3 | 148.6 | 150.5 | 151.9 | 153.7 | 1.2 | 4.3 |
| Administrative support, including clerical | 140.4 | 141.3 | 142.5 | 143.4 | 144.7 | 146.1 | 148.6 | 150.1 | 151.8 | 1.1 | 4.9 |
| Blue-collar workers | 135.3 | 136.1 | 137.1 | 138.3 | 139.5 | 140.6 | 142.7 | 144.1 | 145.6 | 1.0 | 4.4 |
| Service occupations | 139.4 | 140.0 | 141.3 | 142.4 | 143.1 | 144.8 | 146.0 | 147.1 | 148.5 | 1.0 | 3.8 |
| Workers, by industry division: | | | | | | | | | | | |
| Goods-producing | 137.2 | 137.9 | 139.0 | 140.0 | 141.2 | 142.5 | 144.9 | 146.6 | 148.0 | 1.0 | 4.8 |
| Manufacturing | 138.2 | 138.9 | 139.9 | 140.9 | 142.1 | 143.6 | 146.0 | 147.5 | 148.7 | .8 | 4.6 |
| Service-producing | 139.6 | 140.4 | 140.9 | 142.4 | 144.0 | 145.3 | 147.1 | 148.4 | 150.1 | 1.1 | 4.2 |
| Services | 140.8 | 141.7 | 142.3 | 143.2 | 145.1 | 146.5 | 148.0 | 149.3 | 151.2 | 1.3 | 4.2 |
| Health services | 139.1 | 139.1 | 140.5 | 141.4 | 142.7 | 144.3 | 145.9 | 147.5 | 149.0 | 1.0 | 4.4 |
| Hospitals | 139.4 | 140.2 | 141.3 | 142.2 | 143.4 | 145.0 | 146.3 | 147.7 | 149.5 | 1.2 | 4.3 |
| Educational services | 140.2 | 141.0 | 141.3 | 141.7 | 144.6 | 145.8 | 146.5 | 146.8 | 149.7 | 2.0 | 3.5 |
| Public administration[3] | 138.9 | 139.9 | 140.8 | 141.5 | 142.4 | 144.4 | 145.7 | 146.1 | 146.9 | .5 | 3.2 |
| Nonmanufacturing | 139.0 | 139.9 | 140.5 | 141.9 | 143.4 | 144.7 | 146.6 | 148.0 | 149.6 | 1.1 | 4.3 |
| **Private industry workers** | 139.0 | 139.8 | 140.4 | 142.0 | 143.3 | 144.6 | 146.8 | 148.5 | 149.9 | .9 | 4.6 |
| Excluding sales occupations | 138.8 | 139.4 | 140.5 | 141.9 | 143.2 | 144.5 | 146.5 | 148.2 | 149.8 | 1.1 | 4.6 |
| Workers, by occupational group: | | | | | | | | | | | |
| White-collar workers | 141.1 | 142.0 | 142.4 | 144.1 | 145.6 | 146.9 | 149.3 | 151.1 | 152.6 | 1.0 | 4.8 |
| Excluding sales occupations | 141.3 | 141.9 | 143.0 | 144.5 | 146.0 | 147.3 | 149.4 | 151.3 | 152.9 | 1.1 | 4.7 |
| Professional specialty and technical occupations | 141.6 | 142.6 | 142.9 | 144.1 | 145.2 | 146.7 | 148.4 | 150.7 | 152.2 | 1.0 | 4.8 |
| Executive, adminitrative, and managerial occupations | 141.9 | 141.8 | 143.7 | 145.8 | 147.7 | 149.1 | 151.1 | 152.7 | 154.4 | 1.1 | 4.5 |
| Sales occupations | 140.4 | 142.6 | 139.6 | 142.6 | 144.1 | 145.3 | 148.9 | 150.3 | 151.2 | .6 | 4.9 |
| Administrative support occupations, including clerical | 140.6 | 141.4 | 142.6 | 143.7 | 145.0 | 146.2 | 149.0 | 150.6 | 152.3 | 1.1 | 5.0 |
| Blue-collar workers | 135.2 | 135.9 | 136.9 | 138.2 | 139.4 | 140.5 | 142.6 | 144.1 | 145.5 | 1.0 | 4.4 |
| Precision production, craft, and repair occupations | 135.4 | 136.1 | 137.2 | 138.4 | 139.6 | 140.6 | 142.3 | 144.1 | 145.8 | 1.2 | 4.4 |
| Machine operators, assemblers, and inspectors | 135.7 | 136.8 | 137.3 | 138.4 | 139.9 | 141.4 | 144.0 | 145.0 | 146.0 | .7 | 4.4 |
| Transportation and material moving occupations | 130.7 | 130.7 | 131.6 | 133.6 | 134.4 | 135.2 | 137.5 | 138.6 | 139.9 | .9 | 4.1 |
| Handlers, equipment cleaners, helpers, and laborers | 138.5 | 139.2 | 141.0 | 142.3 | 143.2 | 144.4 | 146.4 | 148.1 | 149.4 | .9 | 4.3 |
| Service occupations | 137.3 | 138.0 | 139.5 | 140.6 | 141.0 | 142.6 | 143.9 | 145.4 | 146.6 | .8 | 4.0 |
| Production and nonsupervisory occupations[4] | 138.0 | 139.0 | 139.3 | 140.8 | 141.9 | 143.1 | 145.3 | 146.9 | 148.4 | 1.0 | 4.6 |
| Workers, by industry division: | | | | | | | | | | | |
| Goods-producing | 137.1 | 137.8 | 138.9 | 139.9 | 141.1 | 142.5 | 144.8 | 146.6 | 147.9 | .9 | 4.8 |
| Excluding sales occupations | 136.5 | 137.2 | 138.3 | 139.3 | 140.5 | 141.8 | 144.2 | 145.9 | 147.2 | .9 | 4.8 |
| White-collar occupations | 139.7 | 140.2 | 141.7 | 142.7 | 143.9 | 145.5 | 148.1 | 150.1 | 151.3 | .8 | 5.1 |
| Excluding sales occupations | 138.3 | 138.8 | 140.4 | 141.3 | 142.5 | 143.9 | 146.5 | 148.4 | 149.6 | .8 | 5.0 |
| Blue-collar occupations | 135.5 | 136.3 | 137.1 | 138.3 | 139.4 | 140.7 | 142.8 | 144.4 | 145.8 | 1.0 | 4.6 |
| Construction | 133.4 | 134.3 | 135.6 | 136.9 | 137.9 | 138.7 | 140.8 | 143.2 | 145.1 | 1.3 | 5.2 |
| Manufacturing | 138.2 | 138.9 | 139.9 | 140.9 | 142.1 | 143.6 | 146.0 | 147.5 | 148.7 | .8 | 4.6 |
| White-collar occupations | 140.1 | 140.5 | 141.8 | 143.0 | 144.3 | 145.8 | 148.2 | 150.2 | 151.4 | .8 | 4.9 |
| Excluding sales occupations | 138.3 | 138.7 | 140.1 | 141.3 | 142.5 | 143.8 | 146.2 | 148.2 | 149.3 | .7 | 4.8 |
| Blue-collar occupations | 136.8 | 137.7 | 138.5 | 139.4 | 140.5 | 142.1 | 144.4 | 145.6 | 146.7 | .8 | 4.4 |
| Durables | 138.5 | 139.2 | 139.9 | 141.0 | 142.3 | 144.0 | 146.5 | 148.3 | 149.4 | .7 | 5.0 |
| Nondurables | 137.6 | 138.2 | 139.6 | 140.4 | 141.5 | 142.8 | 144.9 | 146.0 | 147.5 | 1.0 | 4.2 |
| Service-producing | 139.6 | 140.5 | 140.9 | 142.8 | 144.1 | 145.3 | 147.4 | 149.1 | 150.6 | 1.0 | 4.5 |
| Excluding sales occupations | 140.0 | 140.6 | 141.7 | 143.3 | 144.6 | 145.9 | 147.7 | 149.4 | 151.1 | 1.1 | 4.5 |
| White-collar occupations | 141.2 | 142.2 | 142.3 | 144.3 | 145.8 | 147.0 | 149.3 | 151.0 | 152.6 | 1.1 | 4.7 |
| Excluding sales occupations | 142.2 | 142.8 | 143.8 | 145.5 | 147.0 | 148.3 | 150.3 | 152.1 | 153.9 | 1.2 | 4.7 |
| Blue-collar occupations | 134.3 | 134.8 | 136.2 | 137.8 | 139.1 | 139.8 | 141.8 | 143.1 | 144.5 | 1.0 | 3.9 |
| Service occupations | 137.0 | 137.8 | 139.3 | 140.5 | 140.8 | 142.4 | 143.6 | 145.1 | 146.3 | .8 | 3.9 |
| Transportation and public utilities | 138.5 | 139.3 | 139.7 | 140.9 | 141.8 | 142.3 | 143.9 | 145.7 | 147.4 | 1.2 | 3.9 |
| Transportation | 136.7 | 137.3 | 136.8 | 138.1 | 138.7 | 139.5 | 140.4 | 141.8 | 142.8 | .7 | 3.0 |
| Public utilities | 140.7 | 141.9 | 143.4 | 144.6 | 145.7 | 146.1 | 148.6 | 150.9 | 153.5 | 1.7 | 5.4 |
| Communications | 140.5 | 141.7 | 143.3 | 144.9 | 146.1 | 146.0 | 148.4 | 150.9 | 153.9 | 2.0 | 5.3 |
| Electric, gas, and sanitary services | 141.0 | 142.1 | 143.4 | 144.2 | 145.1 | 146.1 | 148.9 | 151.0 | 152.9 | 1.3 | 5.4 |
| Wholesale and retail trade | 137.6 | 138.2 | 138.9 | 141.1 | 142.2 | 143.5 | 145.6 | 147.3 | 148.3 | .7 | 4.3 |
| Excluding sales occupations | 138.1 | 138.8 | 139.9 | 141.9 | 142.8 | 144.3 | 146.4 | 148.1 | 149.6 | 1.0 | 4.8 |
| Wholesale trade | 140.8 | 142.8 | 142.7 | 144.6 | 146.3 | 148.5 | 150.0 | 151.8 | 152.1 | .2 | 4.0 |
| Excluding sales occupations | 140.0 | 141.2 | 142.4 | 144.0 | 145.8 | 147.4 | 149.6 | 151.1 | 152.7 | 1.1 | 4.7 |
| Retail trade | 135.9 | 135.6 | 136.8 | 139.1 | 140.0 | 140.7 | 143.2 | 144.8 | 146.2 | 1.0 | 4.4 |
| General merchandise stores | 133.2 | 134.0 | 135.0 | 135.6 | 137.2 | 138.3 | 139.7 | 141.0 | 142.2 | .9 | 3.6 |
| Food stores | 133.7 | 132.7 | 134.3 | 135.7 | 137.0 | 138.1 | 140.1 | 142.5 | 143.4 | .6 | 4.7 |

See footnotes at end of table.

## 21. Continued—Employment Cost Index, compensation,[1] by occupation and industry group

[June 1989 = 100]

| Series | 1998 | | 1999 | | | | 2000 | | | Percent change | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sept. | Dec. | Mar. | June | Sept. | Dec. | Mar. | June | Sept. | 3 months ended | 12 months ended |
| | | | | | | | | | | Sept. 2000 | |
| Finance, insurance, and real estate | 141.0 | 142.5 | 141.5 | 145.8 | 147.6 | 148.3 | 152.0 | 153.1 | 155.2 | 1.4 | 5.1 |
| Excluding sales occupations | 143.2 | 143.3 | 145.6 | 148.8 | 151.0 | 151.6 | 154.2 | 155.5 | 157.4 | 1.2 | 4.2 |
| Banking, savings and loan, and other credit agencies | 148.4 | 146.7 | 148.8 | 155.4 | 159.3 | 159.8 | 162.7 | 164.2 | 165.8 | 1.0 | 4.1 |
| Insurance | 141.9 | 141.7 | 141.7 | 144.0 | 144.5 | 145.8 | 149.9 | 151.3 | 154.8 | 2.3 | 7.1 |
| Services | 141.8 | 142.7 | 143.5 | 144.6 | 146.1 | 147.6 | 149.4 | 151.2 | 152.9 | 1.1 | 4.7 |
| Business services | 143.5 | 145.9 | 147.5 | 148.7 | 150.7 | 151.9 | 154.2 | 156.3 | 157.5 | .8 | 4.5 |
| Health services | 139.0 | 139.0 | 140.5 | 141.4 | 142.6 | 144.2 | 145.8 | 147.5 | 149.0 | 1.0 | 4.5 |
| Hospitals | 139.1 | 139.9 | 141.2 | 142.1 | 143.0 | 144.6 | 145.8 | 147.5 | 149.2 | 1.2 | 4.3 |
| Educational services | 147.0 | 147.7 | 148.3 | 148.7 | 152.2 | 153.0 | 154.0 | 154.9 | 158.8 | 2.5 | 4.3 |
| Colleges and universities | 147.8 | 148.5 | 149.2 | 149.6 | 152.6 | 153.3 | 154.6 | 155.5 | 158.6 | 2.0 | 3.9 |
| Nonmanufacturing | 138.9 | 139.7 | 140.3 | 142.0 | 143.4 | 144.5 | 146.7 | 148.4 | 150.0 | 1.1 | 4.6 |
| White-collar workers | 141.1 | 142.0 | 142.3 | 144.1 | 145.6 | 146.9 | 149.2 | 151.0 | 152.6 | 1.1 | 4.8 |
| Excluding sales occupations | 142.0 | 142.7 | 143.7 | 145.3 | 146.8 | 148.1 | 150.2 | 152.0 | 153.8 | 1.2 | 4.8 |
| Blue-collar occupations | 133.4 | 134.0 | 135.2 | 136.8 | 138.0 | 138.7 | 140.6 | 142.3 | 143.9 | 1.1 | 4.3 |
| Service occupations | 136.9 | 137.7 | 139.2 | 140.4 | 140.7 | 142.3 | 143.5 | 145.1 | 146.3 | .8 | 4.0 |
| **State and local government workers** | 139.0 | 139.8 | 140.5 | 141.0 | 143.1 | 144.6 | 145.5 | 145.9 | 147.8 | 1.3 | 3.3 |
| Workers, by occupational group: | | | | | | | | | | | |
| White-collar workers | 138.4 | 139.3 | 139.8 | 140.2 | 142.6 | 144.0 | 144.9 | 145.3 | 147.3 | 1.4 | 3.3 |
| Professional specialty and technical | 137.7 | 138.5 | 138.8 | 139.3 | 142.0 | 143.2 | 144.1 | 144.5 | 146.6 | 1.5 | 3.2 |
| Executive, administrative, and managerial | 140.4 | 141.6 | 142.6 | 142.8 | 144.5 | 146.1 | 147.0 | 147.2 | 149.2 | 1.4 | 3.3 |
| Administrative support, including clerical | 139.5 | 140.3 | 141.4 | 141.3 | 143.0 | 145.0 | 145.9 | 146.5 | 148.3 | 1.2 | 3.7 |
| Blue-collar workers | 136.8 | 137.8 | 138.8 | 139.5 | 140.9 | 142.5 | 143.7 | 144.2 | 145.9 | 1.2 | 3.5 |
| Workers, by industry division: | | | | | | | | | | | |
| Services | 139.0 | 139.7 | 140.0 | 140.5 | 143.2 | 144.5 | 145.2 | 145.5 | 148.0 | 1.7 | 3.4 |
| Services excluding schools[5] | 138.7 | 138.8 | 139.6 | 140.3 | 142.6 | 143.8 | 145.2 | 145.8 | 147.6 | 1.2 | 3.5 |
| Health services | 140.3 | 140.7 | 141.2 | 142.0 | 144.2 | 145.8 | 147.3 | 147.9 | 150.0 | 1.4 | 4.0 |
| Hospitals | 140.7 | 141.2 | 141.7 | 142.7 | 144.8 | 146.3 | 147.9 | 148.4 | 150.7 | 1.5 | 4.1 |
| Educational services | 138.8 | 139.6 | 139.9 | 140.3 | 143.1 | 144.4 | 145.0 | 145.2 | 147.9 | 1.9 | 3.4 |
| Schools | 139.1 | 139.9 | 140.2 | 140.6 | 143.5 | 144.7 | 145.3 | 145.5 | 148.2 | 1.9 | 3.3 |
| Elementary and secondary | 138.8 | 139.3 | 139.6 | 140.0 | 142.9 | 144.1 | 144.5 | 144.7 | 147.3 | 1.8 | 3.1 |
| Colleges and universities | 140.4 | 141.5 | 141.7 | 142.1 | 144.8 | 146.5 | 147.4 | 147.6 | 150.5 | 2.0 | 3.9 |
| Public administration[3] | 138.9 | 139.9 | 140.8 | 141.5 | 142.4 | 144.4 | 145.7 | 146.1 | 146.9 | .5 | 3.2 |

[1] Cost (cents per hour worked) measured in the Employment Cost Index consists of wages, salaries, and employer cost of employee benefits.

[2] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[3] Consists of legislative, judicial, administrative, and regulatory activities.

[4] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[5] Includes, for example, library, social, and health services.

## 22. Employment Cost Index, wages and salaries, by occupation and industry group

[June 1989 = 100]

| Series | 1998 | | 1999 | | | | 2000 | | | Percent change | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sept. | Dec. | Mar. | June | Sept. | Dec. | Mar. | June | Sept. | 3 months ended | 12 months ended |
| | | | | | | | | | | Sept. 2000 | |
| **Civilian workers**[1] | 136.8 | 137.7 | 138.4 | 139.8 | 141.3 | 142.5 | 144.0 | 145.4 | 147.0 | 1.1 | 4.0 |
| Workers, by occupational group: | | | | | | | | | | | |
| White-collar workers | 138.8 | 139.7 | 140.1 | 141.6 | 143.3 | 144.6 | 146.2 | 147.6 | 149.2 | 1.1 | 4.1 |
| Professional specialty and technical | 138.5 | 139.4 | 140.1 | 141.0 | 142.6 | 144.0 | 144.9 | 146.4 | 148.3 | 1.3 | 4.0 |
| Executive, administrative, and managerial | 140.5 | 140.3 | 141.6 | 143.8 | 145.9 | 147.2 | 148.6 | 149.9 | 151.6 | 1.1 | 3.9 |
| Administrative support, including clerical | 137.5 | 138.6 | 140.0 | 140.9 | 142.3 | 143.5 | 145.5 | 146.9 | 148.5 | 1.1 | 4.4 |
| Blue-collar workers | 132.6 | 133.3 | 134.5 | 135.8 | 137.0 | 137.9 | 139.2 | 140.6 | 142.0 | 1.0 | 3.6 |
| Service occupations | 136.1 | 137.0 | 138.3 | 139.4 | 140.1 | 141.7 | 143.0 | 144.0 | 145.7 | 1.2 | 4.0 |
| Workers, by industry division: | | | | | | | | | | | |
| Goods-producing | 134.4 | 135.2 | 136.3 | 137.4 | 138.6 | 139.7 | 141.3 | 143.0 | 144.3 | .9 | 4.1 |
| Manufacturing | 136.0 | 136.8 | 137.9 | 139.0 | 140.2 | 141.5 | 142.9 | 144.4 | 145.7 | .9 | 3.9 |
| Service-producing | 137.8 | 138.7 | 139.2 | 140.7 | 142.3 | 143.5 | 145.0 | 146.3 | 148.0 | 1.2 | 4.0 |
| Services | 139.6 | 140.5 | 141.5 | 142.3 | 144.1 | 145.5 | 146.6 | 147.9 | 149.9 | 1.4 | 4.0 |
| Health services | 137.6 | 137.6 | 138.8 | 139.7 | 140.9 | 142.5 | 143.8 | 145.3 | 146.7 | 1.0 | 4.1 |
| Hospitals | 136.4 | 137.1 | 138.1 | 138.8 | 140.1 | 141.6 | 142.6 | 143.8 | 145.6 | 1.3 | 3.9 |
| Educational services | 139.1 | 140.0 | 140.2 | 140.6 | 143.7 | 144.7 | 145.3 | 145.6 | 148.9 | 2.3 | 3.6 |
| Public administration[2] | 134.8 | 135.9 | 136.9 | 137.8 | 139.5 | 141.5 | 142.5 | 142.9 | 144.6 | 1.2 | 3.7 |
| Nonmanufacturing | 137.0 | 137.8 | 138.4 | 139.9 | 141.5 | 142.6 | 144.2 | 145.5 | 147.2 | 1.2 | 4.0 |
| **Private industry workers** | 136.6 | 137.4 | 138.1 | 139.7 | 141.0 | 142.2 | 143.9 | 145.4 | 146.8 | 1.0 | 4.1 |
| Excluding sales occupations | 136.3 | 136.9 | 138.2 | 139.6 | 140.8 | 142.0 | 143.5 | 145.1 | 146.5 | 1.0 | 4.0 |
| Workers, by occupational group: | | | | | | | | | | | |
| White-collar workers | 139.0 | 139.9 | 140.3 | 142.1 | 143.5 | 144.8 | 146.6 | 148.3 | 149.7 | .9 | 4.3 |
| Excluding sales occupations | 139.1 | 139.7 | 141.0 | 142.5 | 143.9 | 145.2 | 146.7 | 148.5 | 149.9 | .9 | 4.2 |
| Professional specialty and technical occupations | 138.7 | 139.7 | 140.7 | 141.8 | 142.6 | 144.1 | 145.1 | 147.3 | 148.6 | .9 | 4.2 |
| Executive, administrative, and managerial occupations | 140.9 | 140.5 | 141.9 | 144.3 | 146.4 | 147.6 | 149.2 | 150.7 | 152.3 | 1.1 | 4.0 |
| Sales occupations | 138.8 | 141.3 | 137.3 | 140.5 | 142.1 | 143.3 | 146.7 | 147.9 | 149.0 | .7 | 4.9 |
| Administrative support occupations, including clerical | 137.9 | 138.9 | 140.4 | 141.4 | 142.7 | 143.8 | 146.0 | 147.5 | 149.1 | 1.1 | 4.5 |
| Blue-collar workers | 132.4 | 133.2 | 134.3 | 135.6 | 136.8 | 137.7 | 139.1 | 140.5 | 141.9 | 1.0 | 3.7 |
| Precision production, craft, and repair occupations | 132.3 | 133.0 | 134.3 | 135.6 | 136.7 | 137.5 | 138.9 | 140.6 | 142.0 | 1.0 | 3.9 |
| Machine operators, assemblers, and inspectors | 133.8 | 134.9 | 135.7 | 136.7 | 138.3 | 139.5 | 140.7 | 141.6 | 142.9 | .9 | 3.3 |
| Transportation and material moving occupations | 127.6 | 127.8 | 129.1 | 131.0 | 131.9 | 132.7 | 134.1 | 135.2 | 136.5 | 1.0 | 3.5 |
| Handlers, equipment cleaners, helpers, and laborers | 135.1 | 135.8 | 137.3 | 138.3 | 139.4 | 140.4 | 141.8 | 143.6 | 145.0 | 1.0 | 4.0 |
| Service occupations | 134.4 | 135.3 | 136.7 | 137.8 | 138.0 | 139.6 | 141.0 | 142.5 | 143.5 | .7 | 4.0 |
| Production and nonsupervisory occupations[3] | 135.2 | 136.4 | 136.8 | 138.2 | 139.3 | 140.4 | 142.1 | 143.7 | 145.0 | .9 | 4.1 |
| Workers, by industry division: | | | | | | | | | | | |
| Goods-producing | 134.3 | 135.2 | 136.3 | 137.3 | 138.5 | 139.7 | 141.3 | 143.0 | 144.3 | .9 | 4.2 |
| Excluding sales occupations | 133.6 | 134.4 | 135.5 | 136.6 | 137.8 | 138.9 | 140.5 | 142.1 | 143.4 | .9 | 4.1 |
| White-collar occupations | 137.4 | 138.2 | 139 4 | 140.5 | 141.7 | 143.0 | 145.0 | 146.8 | 147.9 | .7 | 4.4 |
| Excluding sales occupations | 135.7 | 136.4 | 137.8 | 138.8 | 140.1 | 141.3 | 143.2 | 144.9 | 146.0 | .8 | 4.2 |
| Blue-collar occupations | 132.3 | 133.3 | 134.3 | 135.4 | 136.6 | 137.6 | 139.0 | 140.5 | 142.0 | 1.1 | 4.0 |
| Construction | 128.5 | 129.3 | 130.7 | 131.9 | 133.0 | 133.6 | 136.0 | 138.0 | 139.4 | 1.0 | 4.8 |
| Manufacturing | 136.0 | 136.8 | 137.9 | 139.0 | 140.2 | 141.5 | 142.9 | 144.4 | 145.7 | .9 | 3.9 |
| White-collar occupations | 138.3 | 139.0 | 140.1 | 141.4 | 142.7 | 144.0 | 145.8 | 147.7 | 148.7 | .7 | 4.2 |
| Excluding sales occupations | 136.3 | 137.1 | 138.3 | 139.6 | 140.8 | 142.0 | 143.7 | 145.6 | 146.6 | .7 | 4.1 |
| Blue-collar occupations | 134.3 | 135.3 | 136.3 | 137.2 | 138.4 | 139.7 | 140.8 | 142.0 | 143.4 | 1.0 | 3.6 |
| Durables | 135.9 | 136.9 | 137.9 | 139.1 | 140.4 | 141.8 | 143.0 | 144.7 | 146.1 | 1.0 | 4.1 |
| Nondurables | 136.0 | 136.8 | 138.0 | 138.7 | 139.7 | 140.9 | 142.7 | 143.9 | 145.0 | .8 | 3.8 |
| Service-producing | 137.6 | 138.4 | 138.9 | 140.8 | 142.1 | 143.3 | 145.0 | 146.5 | 147.9 | 1.0 | 4.1 |
| Excluding sales occupations | 137.9 | 138.5 | 139.8 | 141.4 | 142.6 | 143.8 | 145.3 | 146.9 | 148.3 | 1.0 | 4.0 |
| White-collar occupations | 139.2 | 140.1 | 140.3 | 142.3 | 143.8 | 145.0 | 146.9 | 148.5 | 150.0 | 1.0 | 4.3 |
| Excluding sales occupations | 140.2 | 140.7 | 142.0 | 143.7 | 145.1 | 146.4 | 147.8 | 149.6 | 151.2 | 1.1 | 4.2 |
| Blue-collar occupations | 132.4 | 132.9 | 134.4 | 135.9 | 137.0 | 137.8 | 139.1 | 140.3 | 141.6 | .9 | 3.4 |
| Service occupations | 134.2 | 135.2 | 136.7 | 137.8 | 138.0 | 139.6 | 141.1 | 142.5 | 143.5 | .7 | 4.0 |
| Transportation and public utilities | 134.3 | 135.1 | 135.4 | 136.8 | 137.5 | 137.9 | 138.5 | 140.0 | 141.3 | .9 | 2.8 |
| Transportation | 132.4 | 132.9 | 132.3 | 133.7 | 134.4 | 134.9 | 134.9 | 136.2 | 137.4 | .9 | 2.2 |
| Public utilities | 136.5 | 137.8 | 139.2 | 140.6 | 141.5 | 141.8 | 143.2 | 144.9 | 146.4 | 1.0 | 3.5 |
| Communications | 136.7 | 138.0 | 139.4 | 141.1 | 141.9 | 142.2 | 143.4 | 145.0 | 146.7 | 1.2 | 3.4 |
| Electric, gas, and sanitary services | 136.3 | 137.4 | 138.9 | 140.0 | 140.9 | 141.3 | 143.0 | 144.7 | 145.9 | .8 | 3.5 |
| Wholesale and retail trade | 136.6 | 137.0 | 137.7 | 139.6 | 140.7 | 142.0 | 143.8 | 145.5 | 146.4 | .6 | 4.1 |
| Excluding sales occupations | 137.6 | 138.2 | 139.5 | 141.1 | 141.8 | 143.3 | 145.2 | 146.8 | 148.2 | 1.0 | 4.5 |
| Wholesale trade | 139.3 | 141.3 | 140.7 | 142.3 | 144.3 | 146.5 | 147.4 | 149.4 | 149.6 | .1 | 3.7 |
| Excluding sales occupations | 139.6 | 140.8 | 141.9 | 143.0 | 144.8 | 146.4 | 147.9 | 149.7 | 151.3 | 1.1 | 4.5 |
| Retail trade | 135.2 | 134.8 | 136.2 | 138.3 | 138.9 | 139.6 | 142.1 | 143.5 | 144.8 | .9 | 4.2 |
| General merchandise stores | 132.2 | 133.0 | 133.7 | 134.3 | 135.6 | 136.7 | 137.8 | 138.5 | 139.7 | .9 | 3.0 |
| Food stores | 131.7 | 130.5 | 131.8 | 132.8 | 133.9 | 134.9 | 136.7 | 139.5 | 140.2 | .5 | 4.7 |

See footnotes at end of table.

## 22. Continued—Employment Cost Index, wages and salaries, by occupation and industry group

[June 1989 = 100]

| Series | 1998 | | 1999 | | | | 2000 | | | Percent change | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sept. | Dec. | Mar. | June | Sept. | Dec. | Mar. | June | Sept. | 3 months ended | 12 months ended |
| | | | | | | | | | | Sept. 2000 | |
| Finance, insurance, and real estate | 138.1 | 139.8 | 137.2 | 142.4 | 144.5 | 145.2 | 148.7 | 149.5 | 151.7 | 1.5 | 5.0 |
| Excluding sales occupations | 139.7 | 139.6 | 141.0 | 144.8 | 147.5 | 148.0 | 150.2 | 151.5 | 153.3 | 1.2 | 3.9 |
| Banking, savings and loan, and other credit agencies | 147.0 | 144.4 | 146.1 | 154.5 | 159.2 | 159.6 | 162.0 | 163.3 | 165.0 | 1.0 | 3.6 |
| Insurance | 138.7 | 138.5 | 137.4 | 139.8 | 140.2 | 141.5 | 145.5 | 146.6 | 150.7 | 2.8 | 7.5 |
| Services | 140.0 | 140.8 | 142.2 | 143.2 | 144.5 | 146.0 | 147.4 | 149.1 | 150.6 | 1.0 | 4.2 |
| Business services | 141.8 | 144.1 | 145.4 | 146.3 | 148.5 | 149.8 | 152.0 | 154.1 | 155.3 | .8 | 4.6 |
| Health services | 137.5 | 137.4 | 138.7 | 139.6 | 140.6 | 142.2 | 143.5 | 145.3 | 146.6 | .9 | 4.3 |
| Hospitals | 135.8 | 136.5 | 137.6 | 138.3 | 139.3 | 140.9 | 141.8 | 143.3 | 144.9 | 1.1 | 4.0 |
| Educational services | 142.8 | 143.5 | 143.9 | 144.2 | 147.5 | 148.2 | 148.9 | 149.6 | 153.4 | 2.5 | 4.0 |
| Colleges and universities | 142.8 | 143.6 | 144.1 | 144.4 | 147.2 | 147.9 | 148.9 | 149.4 | 152.5 | 2.1 | 3.6 |
| Nonmanufacturing | 136.5 | 137.4 | 137.9 | 139.7 | 141.0 | 142.1 | 143.9 | 145.5 | 146.9 | 1.0 | 4.2 |
| White-collar workers | 138.9 | 139.8 | 140.1 | 142.0 | 143.5 | 144.7 | 146.5 | 148.2 | 149.6 | .9 | 4.3 |
| Excluding sales occupations | 139.8 | 140.3 | 141.6 | 143.2 | 144.6 | 145.9 | 147.4 | 149.1 | 150.7 | 1.1 | 4.2 |
| Blue-collar occupations | 130.5 | 131.1 | 132.4 | 134.0 | 135.1 | 135.8 | 137.4 | 138.9 | 140.3 | 1.0 | 3.8 |
| Service occupations | 134.1 | 135.1 | 136.5 | 137.7 | 137.9 | 139.5 | 140.9 | 142.4 | 143.4 | .7 | 4.0 |
| **State and local government workers** | 137.6 | 138.5 | 139.0 | 139.6 | 142.2 | 143.5 | 144.3 | 144.7 | 147.2 | 1.7 | 3.5 |
| Workers, by occupational group: | | | | | | | | | | | |
| White-collar workers | 137.6 | 138.5 | 138.9 | 139.3 | 142.1 | 143.4 | 144.1 | 144.5 | 147.1 | 1.8 | 3.5 |
| Professional specialty and technical | 137.9 | 138.7 | 138.9 | 139.4 | 142.5 | 143.6 | 144.3 | 144.7 | 147.4 | 1.9 | 3.4 |
| Executive, administrative, and managerial | 138.0 | 139.3 | 140.1 | 140.5 | 142.7 | 144.3 | 144.9 | 145.1 | 147.3 | 1.5 | 3.2 |
| Administrative support, including clerical | 135.4 | 136.5 | 137.4 | 137.5 | 139.6 | 141.7 | 142.4 | 143.0 | 145.0 | 1.4 | 3.9 |
| Blue-collar workers | 135.1 | 136.0 | 136.9 | 137.6 | 139.4 | 140.7 | 141.5 | 142.1 | 143.9 | 1.3 | 3.2 |
| Workers, by industry division: | | | | | | | | | | | |
| Services | 138.4 | 139.2 | 139.5 | 139.9 | 142.9 | 144.0 | 144.6 | 144.9 | 147.9 | 2.1 | 3.5 |
| Services excluding schools[4] | 137.8 | 138.2 | 139.0 | 139.6 | 142.1 | 143.2 | 144.3 | 144.8 | 146.7 | 1.3 | 3.2 |
| Health services | 138.7 | 139.2 | 139.7 | 140.4 | 142.8 | 144.2 | 145.3 | 145.7 | 147.7 | 1.4 | 3.4 |
| Hospitals | 138.6 | 139.1 | 139.7 | 140.6 | 142.8 | 144.1 | 145.3 | 145.6 | 147.7 | 1.4 | 3.4 |
| Educational services | 138.4 | 139.3 | 139.5 | 139.8 | 142.9 | 144.0 | 144.5 | 144.8 | 148.0 | 2.2 | 3.6 |
| Schools | 138.5 | 139.5 | 139.6 | 140.0 | 143.1 | 144.2 | 144.7 | 144.9 | 148.1 | 2.2 | 3.5 |
| Elementary and secondary | 138.7 | 139.3 | 139.5 | 139.9 | 143.1 | 144.1 | 144.5 | 144.6 | 147.9 | 2.3 | 3.4 |
| Colleges and universities | 137.7 | 139.6 | 139.6 | 139.8 | 142.6 | 144.4 | 144.9 | 145.6 | 148.3 | 1.9 | 4.0 |
| Public administration[2] | 134.8 | 135.9 | 136.9 | 137.8 | 139.5 | 141.5 | 142.5 | 142.9 | 144.6 | 1.2 | 3.7 |

[1] Consists of private industry workers (excluding farm and household workers) and State and local government (excluding Federal Government) workers.

[2] Consists of legislative, judicial, administrative, and regulatory activities.

[3] This series has the same industry and occupational coverage as the Hourly Earnings index, which was discontinued in January 1989.

[4] Includes, for example, library, social, and health services.

## 23. Employment Cost Index, benefits, private industry workers by occupation and industry group

[June 1989 = 100]

| Series | 1998 | | 1999 | | | | 2000 | | | Percent change | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sept. | Dec. | Mar. | June | Sept. | Dec. | Mar. | June | Sept. | 3 months ended | 12 months ended |
| | | | | | | | | | | Sept. 2000 | |
| **Private industry workers** | 144.5 | 145.2 | 145.8 | 147.3 | 148.6 | 150.2 | 153.8 | 155.7 | 157.5 | 1.2 | 6.0 |
| Workers, by occupational group: | | | | | | | | | | | |
| White-collar workers | 146.6 | 147.4 | 147.9 | 149.4 | 151.0 | 152.5 | 156.3 | 158.5 | 160.4 | 1.2 | 6.2 |
| Blue-collar workers | 141.0 | 141.6 | 142.2 | 143.6 | 144.8 | 146.2 | 150.0 | 151.6 | 153.1 | 1.0 | 5.7 |
| Workers, by industry division: | | | | | | | | | | | |
| Goods-producing | 143.0 | 143.2 | 144.3 | 145.2 | 146.3 | 148.2 | 152.3 | 154.2 | 155.7 | 1.0 | 6.4 |
| Service-producing | 144.9 | 145.7 | 146.1 | 147.9 | 149.4 | 150.7 | 154.0 | 156.0 | 157.9 | 1.2 | 5.7 |
| Manufacturing | 142.6 | 142.7 | 143.6 | 144.5 | 145.7 | 147.8 | 152.3 | 153.9 | 154.9 | .6 | 6.3 |
| Nonmanufacturing | 145.0 | 145.8 | 146.3 | 148.0 | 149.4 | 150.7 | 154.0 | 156.1 | 158.1 | 1.3 | 5.8 |

## 24. Employment Cost Index, private nonfarm workers by bargaining status, region, and area size

[June 1989 = 100]

| Series | 1998 | | 1999 | | | | 2000 | | | Percent change | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sept. | Dec. | Mar. | June | Sept. | Dec. | Mar. | June | Sept. | 3 months ended | 12 months ended |
| | | | | | | | | | | Sept. 2000 | |
| **COMPENSATION** | | | | | | | | | | | |
| **Workers, by bargaining status[1]** | | | | | | | | | | | |
| Union | 136.8 | 137.5 | 138.0 | 139.0 | 140.2 | 141.2 | 143.0 | 144.4 | 146.1 | 1.2 | 4.2 |
| Goods-producing | 135.6 | 136.5 | 136.8 | 138.2 | 139.2 | 140.8 | 143.3 | 144.8 | 146.8 | 1.4 | 5.5 |
| Service-producing | 138.0 | 138.5 | 139.2 | 139.7 | 141.0 | 141.4 | 142.5 | 143.9 | 145.2 | .9 | 3.0 |
| Manufacturing | 136.0 | 136.9 | 137.0 | 138.1 | 139.1 | 141.0 | 144.5 | 145.4 | 147.1 | 1.2 | 5.8 |
| Nonmanufacturing | 136.9 | 137.4 | 138.1 | 139.2 | 140.3 | 140.8 | 141.7 | 143.4 | 145.0 | 1.1 | 3.3 |
| Nonunion | 139.3 | 140.1 | 140.8 | 142.5 | 143.8 | 145.2 | 147.4 | 149.1 | 150.6 | 1.0 | 4.7 |
| Goods-producing | 137.7 | 138.3 | 139.7 | 140.5 | 141.8 | 143.1 | 145.4 | 147.2 | 148.4 | .8 | 4.7 |
| Service-producing | 139.7 | 140.6 | 141.1 | 143.0 | 144.4 | 145.7 | 148.0 | 149.6 | 151.2 | 1.1 | 4.7 |
| Manufacturing | 138.9 | 139.4 | 140.7 | 141.7 | 143.0 | 144.4 | 146.5 | 148.2 | 149.2 | .7 | 4.3 |
| Nonmanufacturing | 139.1 | 140.0 | 140.6 | 142.4 | 143.8 | 145.1 | 147.4 | 149.1 | 150.7 | 1.1 | 4.8 |
| **Workers, by region[1]** | | | | | | | | | | | |
| Northeast | 138.7 | 139.5 | 140.5 | 141.5 | 143.2 | 144.3 | 146.3 | 147.6 | 149.3 | 1.2 | 4.3 |
| South | 137.6 | 138.1 | 139.1 | 140.7 | 141.8 | 143.0 | 145.0 | 146.7 | 147.6 | .6 | 4.1 |
| Midwest (formerly North Central) | 140.9 | 141.4 | 141.7 | 143.6 | 145.0 | 146.3 | 148.9 | 150.7 | 152.2 | 1.0 | 5.0 |
| West | 138.5 | 140.0 | 140.3 | 142.1 | 143.3 | 144.7 | 147.0 | 148.8 | 150.8 | 1.3 | 5.2 |
| **Workers, by area size[1]** | | | | | | | | | | | |
| Metropolitan areas | 139.1 | 139.8 | 140.4 | 142.0 | 143.3 | 144.7 | 146.9 | 148.6 | 150.1 | 1.0 | 4.7 |
| Other areas | 138.2 | 139.4 | 140.5 | 141.8 | 143.1 | 143.6 | 146.0 | 147.7 | 148.8 | .7 | 4.0 |
| **WAGES AND SALARIES** | | | | | | | | | | | |
| **Workers, by bargaining status[1]** | | | | | | | | | | | |
| Union | 132.4 | 133.1 | 133.6 | 134.7 | 135.7 | 136.5 | 137.2 | 138.5 | 140.0 | 1.1 | 3.2 |
| Goods-producing | 131.0 | 131.7 | 132.3 | 133.8 | 134.9 | 136.1 | 137.2 | 138.4 | 140.2 | 1.3 | 3.9 |
| Service-producing | 134.1 | 134.8 | 135.4 | 135.8 | 136.8 | 137.2 | 137.6 | 138.9 | 140.1 | .9 | 2.4 |
| Manufacturing | 132.2 | 133.0 | 133.6 | 134.7 | 135.8 | 137.5 | 138.8 | 139.7 | 141.4 | 1.2 | 4.1 |
| Nonmanufacturing | 132.4 | 133.1 | 133.7 | 134.6 | 135.6 | 135.9 | 136.4 | 137.8 | 139.2 | 1.0 | 2.7 |
| Nonunion | 137.4 | 138.3 | 139.0 | 140.7 | 142.0 | 143.3 | 145.1 | 146.7 | 148.1 | 1.0 | 4.3 |
| Goods-producing | 135.7 | 136.5 | 137.8 | 138.8 | 140.0 | 141.1 | 142.9 | 144.7 | 145.8 | .8 | 4.1 |
| Service-producing | 137.9 | 138.8 | 139.3 | 141.3 | 142.6 | 143.9 | 145.8 | 147.3 | 148.7 | 1.0 | 4.3 |
| Manufacturing | 137.3 | 138.2 | 139.4 | 140.5 | 141.7 | 142.9 | 144.4 | 146.1 | 147.2 | .8 | 3.9 |
| Nonmanufacturing | 137.1 | 138.0 | 138.6 | 140.5 | 141.8 | 143.0 | 145.0 | 146.6 | 148.0 | 1.0 | 4.4 |
| **Workers, by region[1]** | | | | | | | | | | | |
| Northeast | 135.4 | 136.4 | 137.1 | 138.2 | 139.9 | 140.9 | 142.3 | 143.7 | 145.3 | 1.1 | 3.9 |
| South | 136.5 | 136.7 | 137.9 | 139.4 | 140.2 | 141.5 | 143.0 | 144.6 | 145.3 | .5 | 3.6 |
| Midwest (formerly North Central) | 137.5 | 138.0 | 138.9 | 141.0 | 142.4 | 143.6 | 145.3 | 147.1 | 148.6 | 1.0 | 4.4 |
| West | 136.7 | 138.4 | 138.2 | 140.2 | 141.3 | 142.6 | 144.7 | 146.3 | 148.2 | 1.3 | 4.9 |
| **Workers, by area size[1]** | | | | | | | | | | | |
| Metropolitan areas | 136.9 | 137.7 | 138.3 | 139.9 | 141.2 | 142.5 | 144.1 | 145.7 | 147.1 | 1.0 | 4.2 |
| Other areas | 134.7 | 136.0 | 137.1 | 138.4 | 139.8 | 140.2 | 142.2 | 143.7 | 144.7 | .7 | 3.5 |

[1] The indexes are calculated differently from those for the occupation and industry groups. For a detailed description of the index calculation, see the *Monthly Labor Review* Technical Note, "Estimation procedures for the Employment Cost Index," May 1982.

## 25. Percent of full-time employees participating in employer-provided benefit plans, and in selected features within plans, medium and large private establishments, selected years, 1980–97

| Item | 1980 | 1982 | 1984 | 1986 | 1988 | 1989 | 1991 | 1993 | 1995 | 1997 |
|---|---|---|---|---|---|---|---|---|---|---|
| Scope of survey (in 000's) | 21,352 | 21,043 | 21,013 | 21,303 | 31,059 | 32,428 | 31,163 | 28,728 | 33,374 | 38,409 |
| Number of employees (in 000's): | | | | | | | | | | |
| With medical care | 20,711 | 20,412 | 20,383 | 20,238 | 27,953 | 29,834 | 25,865 | 23,519 | 25,546 | 29,340 |
| With life insurance | 20,498 | 20,201 | 20,172 | 20,451 | 28,574 | 30,482 | 29,293 | 26,175 | 29,078 | 33,495 |
| With defined benefit plan | 17,936 | 17,676 | 17,231 | 16,190 | 19,567 | 20,430 | 18,386 | 16,015 | 17,417 | 19,202 |
| **Time-off plans** | | | | | | | | | | |
| Participants with: | | | | | | | | | | |
| Paid lunch time | 10 | 9 | 9 | 10 | 11 | 10 | 8 | 9 | – | – |
| Average minutes per day | – | 25 | 26 | 27 | 29 | 26 | 30 | 29 | – | – |
| Paid rest time | 75 | 76 | 73 | 72 | 72 | 71 | 67 | 68 | – | – |
| Average minutes per day | – | 25 | 26 | 26 | 26 | 26 | 28 | 26 | – | – |
| Paid funeral leave | – | – | – | 88 | 85 | 84 | 80 | 83 | 80 | 81 |
| Average days per occurrence | – | – | – | 3.2 | 3.2 | 3.3 | 3.3 | 3.0 | 3.3 | 3.7 |
| Paid holidays | 99 | 99 | 99 | 99 | 96 | 97 | 92 | 91 | 89 | 89 |
| Average days per year | 10.1 | 10.0 | 9.8 | 10.0 | 9.4 | 9.2 | 10.2 | 9.4 | 9.1 | 9.3 |
| Paid personal leave | 20 | 24 | 23 | 25 | 24 | 22 | 21 | 21 | 22 | 20 |
| Average days per year | – | 3.8 | 3.6 | 3.7 | 3.3 | 3.1 | 3.3 | 3.1 | 3.3 | 3.5 |
| Paid vacations | 100 | 99 | 99 | 100 | 98 | 97 | 96 | 97 | 96 | 95 |
| Paid sick leave [1] | 62 | 67 | 67 | 70 | 69 | 68 | 67 | 65 | 58 | 56 |
| Unpaid maternity leave | – | – | – | – | 33 | 37 | 37 | 60 | .. | |
| Unpaid paternity leave | – | – | – | – | 16 | 18 | 26 | 53 | – | – |
| Unpaid family leave | – | – | – | – | – | – | – | – | 84 | 93 |
| **Insurance plans** | | | | | | | | | | |
| Participants in medical care plans | 97 | 97 | 97 | 95 | 90 | 92 | 83 | 82 | 77 | 76 |
| Percent of participants with coverage for: | | | | | | | | | | |
| Home health care | – | – | 46 | 66 | 76 | 75 | 81 | 86 | 78 | 85 |
| Extended care facilities | 58 | 62 | 62 | 70 | 79 | 80 | 80 | 82 | 73 | 78 |
| Physical exam | – | – | 8 | 18 | 28 | 28 | 30 | 42 | 56 | 63 |
| Percent of participants with employee contribution required for: | | | | | | | | | | |
| Self coverage | 26 | 27 | 36 | 43 | 44 | 47 | 51 | 61 | 67 | 69 |
| Average monthly contribution | – | – | $11.93 | $12.80 | $19.29 | $25.31 | $26.60 | $31.55 | $33.92 | $39.14 |
| Family coverage | 46 | 51 | 58 | 63 | 64 | 66 | 69 | 76 | 78 | 80 |
| Average monthly contribution | – | – | $35.93 | $41.40 | $60.07 | $72.10 | $96.97 | $107.42 | $118.33 | $130.07 |
| Participants in life insurance plans | 96 | 96 | 96 | 96 | 92 | 94 | 94 | 91 | 87 | 87 |
| Percent of participants with: | | | | | | | | | | |
| Accidental death and dismemberment insurance | 69 | 72 | 74 | 72 | 78 | 71 | 71 | 76 | 77 | 74 |
| Survivor income benefits | – | – | – | 10 | 8 | 7 | 6 | 5 | 7 | 6 |
| Retiree protection available | – | 64 | 64 | 59 | 49 | 42 | 44 | 41 | 37 | 33 |
| Participants in long-term disability insurance plans | 40 | 43 | 47 | 48 | 42 | 45 | 40 | 41 | 42 | 43 |
| Participants in sickness and accident insurance plans | 54 | 51 | 51 | 49 | 46 | 43 | 45 | 44 | – | – |
| Participants in short-term disability plans [1] | – | – | – | – | – | – | – | – | 53 | 55 |
| **Retirement plans** | | | | | | | | | | |
| Participants in defined benefit pension plans | 84 | 84 | 82 | 76 | 63 | 63 | 59 | 56 | 52 | 50 |
| Percent of participants with: | | | | | | | | | | |
| Normal retirement prior to age 65 | 55 | 58 | 63 | 64 | 59 | 62 | 55 | 52 | 52 | 52 |
| Early retirement available | 98 | 97 | 97 | 98 | 98 | 97 | 98 | 95 | 96 | 95 |
| Ad hoc pension increase in last 5 years | – | – | 47 | 35 | 26 | 22 | 7 | 6 | 4 | 10 |
| Terminal earnings formula | 53 | 52 | 54 | 57 | 55 | 64 | 56 | 61 | 58 | 56 |
| Benefit coordinated with Social Security | 45 | 45 | 56 | 62 | 62 | 63 | 54 | 48 | 51 | 49 |
| Participants in defined contribution plans | – | – | – | 60 | 45 | 48 | 48 | 49 | 55 | 57 |
| Participants in plans with tax-deferred savings arrangements | – | – | – | 33 | 36 | 41 | 44 | 43 | 54 | 55 |
| **Other benefits** | | | | | | | | | | |
| Employees eligible for: | | | | | | | | | | |
| Flexible benefits plans | – | – | – | 2 | 5 | 9 | 10 | 12 | 12 | 13 |
| Reimbursement accounts [2] | – | – | – | 5 | 12 | 23 | 36 | 52 | 38 | 32 |
| Premium conversion plans | – | – | – | – | – | – | – | – | 5 | 7 |

[1] The definitions for paid sick leave and short-term disability (previously sickness and accident insurance) were changed for the 1995 survey. Paid sick leave now includes only plans that specify either a maximum number of days per year or unlimited days. Short-terms disability now includes all insured, self-insured, and State-mandated plans available on a per-disability basis, as well as the unfunded per-disability plans previously reported as sick leave. Sickness and accident insurance, reported in years prior to this survey, included only insured, self-insured, and State-mandated plans providing per-disability benefits at less than full pay.

[2] Prior to 1995, reimbursement accounts included premium conversion plans, which specifically allow medical plan participants to pay required plan premiums with pretax dollars. Also, reimbursement accounts that were part of flexible benefit plans were tabulated separately.

NOTE: Dash indicates data not available.

## 26. Percent of full-time employees participating in employer-provided benefit plans, and in selected features within plans, small private establishments and State and local governments, 1987, 1990, 1992, 1994, and 1996

| Item | Small private establishments | | | | State and local governments | | | |
|---|---|---|---|---|---|---|---|---|
| | 1990 | 1992 | 1994 | 1996 | 1987 | 1990 | 1992 | 1994 |
| Scope of survey (in 000's) | 32,466 | 34,360 | 35,910 | 39,816 | 10,321 | 12,972 | 12,466 | 12,907 |
| Number of employees (in 000's): | | | | | | | | |
| With medical care | 22,402 | 24,396 | 23,536 | 25,599 | 9,599 | 12,064 | 11,219 | 11,192 |
| With life insurance | 20,778 | 21,990 | 21,955 | 24,635 | 8,773 | 11,415 | 11,095 | 11,194 |
| With defined benefit plan | 6,493 | 7,559 | 5,480 | 5,883 | 9,599 | 11,675 | 10,845 | 11,708 |
| **Time-off plans** | | | | | | | | |
| Participants with: | | | | | | | | |
| Paid lunch time | 8 | 9 | – | – | 17 | 11 | 10 | – |
| Average minutes per day | 37 | 37 | – | – | 34 | 36 | 34 | – |
| Paid rest time | 48 | 49 | – | – | 58 | 56 | 53 | – |
| Average minutes per day | 27 | 26 | – | – | 29 | 29 | 29 | – |
| Paid funeral leave | 47 | 50 | 50 | 51 | 56 | 63 | 65 | 62 |
| Average days per occurrence | 2.9 | 3.0 | 3.1 | 3.0 | 3.7 | 3.7 | 3.7 | 3.7 |
| Paid holidays | 84 | 82 | 82 | 80 | 81 | 74 | 75 | 73 |
| Average days per year[1] | 9.5 | 9.2 | 7.5 | 7.6 | 10.9 | 13.6 | 14.2 | 11.5 |
| Paid personal leave | 11 | 12 | 13 | 14 | 38 | 39 | 38 | 38 |
| Average days per year | 2.8 | 2.6 | 2.6 | 3.0 | 2.7 | 2.9 | 2.9 | 3.0 |
| Paid vacations | 88 | 88 | 88 | 86 | 72 | 67 | 67 | 66 |
| Paid sick leave [2] | 47 | 53 | 50 | 50 | 97 | 95 | 95 | 94 |
| Unpaid leave | 17 | 18 | – | – | 57 | 51 | 59 | – |
| Unpaid paternity leave | 8 | 7 | – | – | 30 | 33 | 44 | – |
| Unpaid family leave | – | – | 47 | 48 | – | – | – | 93 |
| **Insurance plans** | | | | | | | | |
| Participants in medical care plans | 69 | 71 | 66 | 64 | 93 | 93 | 90 | 87 |
| Percent of participants with coverage for: | | | | | | | | |
| Home health care | 79 | 80 | – | – | 76 | 82 | 87 | 84 |
| Extended care facilities | 83 | 84 | – | – | 78 | 79 | 84 | 81 |
| Physical exam | 26 | 28 | – | – | 36 | 36 | 47 | 55 |
| Percent of participants with employee contribution required for: | | | | | | | | |
| Self coverage | 42 | 47 | 52 | 52 | 35 | 38 | 43 | 47 |
| Average monthly contribution | $25.13 | $36.51 | $40.97 | $42.63 | $15.74 | $25.53 | $28.97 | $30.20 |
| Family coverage | 67 | 73 | 76 | 75 | 71 | 65 | 72 | 71 |
| Average monthly contribution | $109.34 | $150.54 | $159.63 | $181.53 | $71.89 | $117.59 | $139.23 | $149.70 |
| Participants in life insurance plans | 64 | 64 | 61 | 62 | 85 | 88 | 89 | 87 |
| Percent of participants with: | | | | | | | | |
| Accidental death and dismemberment insurance | 78 | 76 | 79 | 77 | 67 | 67 | 74 | 64 |
| Survivor income benefits | 1 | 1 | 2 | 1 | 1 | 1 | 1 | 2 |
| Retiree protection available | 19 | 25 | 20 | 13 | 55 | 45 | 46 | 46 |
| Participants in long-term disability insurance plans | 19 | 23 | 20 | 22 | 31 | 27 | 28 | 30 |
| Participants in sickness and accident insurance plans | 6 | 26 | 26 | – | 14 | 21 | 22 | 21 |
| Participants in short-term disability plans [2] | – | – | – | 29 | – | – | – | – |
| **Retirement plans** | | | | | | | | |
| Participants in defined benefit pension plans | 20 | 22 | 15 | 15 | 93 | 90 | 87 | 91 |
| Percent of participants with: | | | | | | | | |
| Normal retirement prior to age 65 | 54 | 50 | – | 47 | 92 | 89 | 92 | 92 |
| Early retirement available | 95 | 95 | – | 92 | 90 | 88 | 89 | 87 |
| Ad hoc pension increase in last 5 years | 7 | 4 | – | – | 33 | 16 | 10 | 13 |
| Terminal earnings formula | 58 | 54 | – | 53 | 100 | 100 | 100 | 99 |
| Benefit coordinated with Social Security | 49 | 46 | – | 44 | 18 | 8 | 10 | 49 |
| Participants in defined contribution plans | 31 | 33 | 34 | 38 | 9 | 9 | 9 | 9 |
| Participants in plans with tax-deferred savings arrangements | 17 | 24 | 23 | 28 | 28 | 45 | 45 | 24 |
| **Other benefits** | | | | | | | | |
| Employees eligible for: | | | | | | | | |
| Flexible benefits plans | 1 | 2 | 3 | 4 | 5 | 5 | 5 | 5 |
| Reimbursement accounts [3] | 8 | 14 | 19 | 12 | 5 | 31 | 50 | 64 |
| Premium conversion plans | – | – | – | 7 | – | – | – | – |

[1] Methods used to calculate the average number of paid holidays were revised in 1994 to count partial days more precisely. Average holidays for 1994 are not comparable with those reported in 1990 and 1992.

[2] The definitions for paid sick leave and short-term disability (previously sickness and accident insurance) were changed for the 1996 survey. Paid sick leave now includes only plans that specify either a maximum number of days per year or unlimited days. Short-term disability now includes all insured, self-insured, and State-mandated plans available on a per-disability basis, as well as the unfunded per-disability plans previously reported as sick leave. Sickness and accident insurance, reported in years prior to this survey, included only insured, self-insured, and State-mandated plans providing per-disability benefits at less than full pay.

[3] Prior to 1996, reimbursement accounts included premium conversion plans, which specifically allow medical plan participants to pay required plan premiums with pretax dollars. Also, reimbursement accounts that were part of flexible benefit plans were tabulated separately.

NOTE: Dash indicates data not available.

## 27. Work stoppages involving 1,000 workers or more

| Measure | Annual totals | | 1999 | | | | | | 2000 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1998 | 1999 | July | Aug. | Sept. | Oct. | Nov. | Dec. | Jan.[P] | Feb.[P] | Mar.[P] | Apr.[P] | May[P] | June[P] | July |
| Number of stoppages: | | | | | | | | | | | | | | | |
| Beginning in period | 34 | 17 | 1 | 1 | 2 | 0 | 1 | 0 | 0 | 1 | 2 | 6 | 2 | 5 | |
| In effect during period | 34 | 21 | 6 | 3 | 5 | 2 | 2 | 1 | 1 | 2 | 4 | 7 | 4 | 8 | |
| Workers involved: | | | | | | | | | | | | | | | |
| Beginning in period (in thousands) | 387 | 73 | 1.7 | 11.0 | 19.1 | .0 | 2.0 | .0 | .0 | 17.0 | 5.7 | 26.7 | 136.9 | 11.4 | |
| In effect during period (in thousands) | 387 | 80 | 16.3 | 15.4 | 34.5 | 10.1 | 5.0 | 3.0 | 3.0 | 20.0 | 25.7 | 29.7 | 141.3 | 150.8 | 14 |
| Days idle: | | | | | | | | | | | | | | | |
| Number (in thousands) | 5,116 | 1,995 | 266.4 | 118.8 | 176.2 | 67.1 | 63.6 | 63.0 | 60.0 | 298.0 | 327.6 | 272.2 | 3,095.3 | 3,134.0 | 2,80 |
| Percent of estimated working time[1] | .02 | .01 | .01 | [2] | .01 | [2] | [2] | [2] | [2] | .01 | .01 | .01 | .10 | .10 | |

[1] Agricultural and government employees are included in the total employed and total working time; private household, forestry, and fishery employees are excluded. An explanation of the measurement of idleness as a percentage of the total time worked is found in " 'Total economy' measures of strike idleness," *Monthly Labor Review*, October 1968, pp. 54–56.

[2] Less than 0.005.

[P] = preliminary.

## 28. Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

| Series | Annual average | | 1999 | 2000 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
| **CONSUMER PRICE INDEX FOR ALL URBAN CONSUMERS** | | | | | | | | | | | | | | | |
| All items | 166.6 | 172.2 | 168.3 | 168.8 | 169.8 | 171.2 | 171.3 | 171.5 | 172.4 | 172.8 | 172.8 | 173.7 | 174.0 | 174.1 | 174.0 |
| All items (1967 = 100) | 499.0 | 515.8 | 504.1 | 505.8 | 508.7 | 512.8 | 513.2 | 513.6 | 516.5 | 517.5 | 517.6 | 520.3 | 521.2 | 521.5 | 521.1 |
| Food and beverages | 164.6 | 168.4 | 165.9 | 166.6 | 166.8 | 167.1 | 167.2 | 167.8 | 167.9 | 168.7 | 169.2 | 169.4 | 169.6 | 169.5 | 170.5 |
| Food | 164.1 | 167.8 | 165.4 | 166.1 | 166.3 | 166.5 | 166.6 | 167.3 | 167.3 | 168.1 | 168.7 | 168.9 | 169.1 | 168.9 | 170.0 |
| Food at home | 164.2 | 167.9 | 165.4 | 166.3 | 166.3 | 166.4 | 166.5 | 167.5 | 167.3 | 168.3 | 168.9 | 169.0 | 169.1 | 168.8 | 170.2 |
| Cereals and bakery products | 185.0 | 188.3 | 185.9 | 185.6 | 186.0 | 186.1 | 187.2 | 188.6 | 187.7 | 189.6 | 189.9 | 188.6 | 190.1 | 189.0 | 190.7 |
| Meats, poultry, fish, and eggs | 147.9 | 154.5 | 149.8 | 150.2 | 151.3 | 152.4 | 152.9 | 153.9 | 154.9 | 155.8 | 156.8 | 156.9 | 156.8 | 155.5 | 156.6 |
| Dairy and related products[1] | 159.6 | 160.7 | 162.1 | 160.4 | 160.9 | 159.1 | 160.6 | 159.6 | 159.5 | 160.5 | 161.0 | 161.6 | 161.9 | 161.4 | 161.5 |
| Fruits and vegetables | 203.1 | 204.6 | 204.5 | 208.4 | 203.0 | 201.7 | 201.6 | 204.3 | 199.9 | 201.0 | 202.5 | 204.6 | 206.2 | 207.3 | 215.1 |
| Nonalcoholic beverages and beverage materials | 134.3 | 137.8 | 134.7 | 137.1 | 138.4 | 138.5 | 137.6 | 137.3 | 137.5 | 138.5 | 138.2 | 138.0 | 137.4 | 137.9 | 136.7 |
| Other foods at home | 153.5 | 155.6 | 153.3 | 154.3 | 154.4 | 155.1 | 154.0 | 155.4 | 156.2 | 156.6 | 156.9 | 156.7 | 155.8 | 156.0 | 156.3 |
| Sugar and sweets | 152.3 | 154.0 | 152.3 | 154.8 | 154.4 | 154.6 | 152.4 | 153.7 | 154.0 | 154.1 | 154.6 | 154.6 | 153.9 | 153.0 | 153.5 |
| Fats and oils | 148.3 | 147.4 | 145.1 | 147.0 | 145.6 | 145.9 | 144.8 | 147.0 | 146.6 | 148.1 | 148.9 | 148.7 | 149.7 | 146.5 | 150.2 |
| Other foods | 168.9 | 172.2 | 169.4 | 169.8 | 170.5 | 171.6 | 170.7 | 172.1 | 173.4 | 173.5 | 173.7 | 173.4 | 172.0 | 173.3 | 172.7 |
| Other miscellaneous foods[1,2] | 104.9 | 107.5 | 105.7 | 104.3 | 106.4 | 107.0 | 105.2 | 106.4 | 108.4 | 108.8 | 109.5 | 107.7 | 106.8 | 110.0 | 108.9 |
| Food away from home[1] | 165.1 | 169.0 | 166.8 | 167.2 | 167.6 | 167.9 | 168.1 | 168.3 | 168.6 | 169.1 | 169.5 | 170.0 | 170.3 | 170.4 | 170.8 |
| Other food away from home[1,2] | 105.2 | 109.0 | 106.9 | 107.5 | 107.9 | 107.9 | 108.0 | 108.1 | 108.1 | 108.7 | 109.3 | 110.0 | 110.5 | 111.0 | 111.1 |
| Alcoholic beverages | 169.7 | 174.7 | 171.8 | 172.4 | 173.0 | 173.5 | 173.6 | 173.8 | 174.4 | 175.2 | 175.6 | 175.5 | 175.9 | 176.4 | 176.5 |
| Housing | 163.9 | 169.6 | 164.8 | 166.0 | 167.1 | 167.8 | 167.9 | 168.1 | 169.6 | 170.6 | 170.9 | 171.4 | 171.7 | 171.6 | 171.9 |
| Shelter | 187.3 | 193.4 | 188.6 | 190.1 | 191.0 | 192.2 | 192.3 | 192.4 | 193.3 | 194.1 | 194.7 | 194.6 | 195.2 | 195.2 | 195.1 |
| Rent of primary residence | 177.5 | 183.9 | 180.3 | 181.1 | 181.5 | 182.0 | 182.3 | 182.7 | 183.2 | 183.9 | 184.6 | 185.3 | 186.1 | 186.8 | 187.6 |
| Lodging away from home | 112.3 | 117.5 | 105.8 | 111.3 | 115.1 | 120.9 | 119.4 | 117.5 | 120.5 | 122.8 | 123.0 | 118.1 | 118.5 | 113.9 | 108.8 |
| Owners' equivalent rent of primary residence[3] | 192.9 | 198.7 | 195.2 | 196.2 | 196.6 | 196.9 | 197.2 | 197.6 | 198.2 | 198.6 | 199.2 | 199.9 | 200.5 | 201.2 | 201.8 |
| Tenants' and household insurance[1,2] | 101.3 | 103.7 | 102.2 | 102.4 | 102.4 | 102.6 | 103.1 | 103.8 | 103.9 | 104.2 | 104.0 | 104.2 | 104.2 | 104.5 | 104.7 |
| Fuels and utilities | 128.8 | 137.9 | 129.6 | 129.9 | 132.9 | 131.8 | 131.7 | 132.4 | 138.9 | 141.3 | 140.9 | 143.8 | 143.1 | 142.7 | 145.3 |
| Fuels | 113.5 | 122.8 | 114.1 | 114.3 | 117.6 | 116.3 | 116.1 | 116.8 | 124.0 | 126.5 | 125.9 | 129.1 | 128.3 | 127.7 | 130.6 |
| Fuel oil and other fuels | 91.4 | 129.7 | 106.3 | 114.4 | 147.2 | 130.1 | 123.7 | 121.6 | 120.9 | 120.8 | 120.8 | 133.7 | 137.6 | 140.3 | 144.9 |
| Gas (piped) and electricity | 120.9 | 128.0 | 120.3 | 119.8 | 120.6 | 120.7 | 121.0 | 122.0 | 130.2 | 133.0 | 132.4 | 134.8 | 133.6 | 132.7 | 135.6 |
| Household furnishings and operations | 126.7 | 128.2 | 126.4 | 127.0 | 127.2 | 127.9 | 128.2 | 128.1 | 128.1 | 128.6 | 128.6 | 129.0 | 128.7 | 128.9 | 128.6 |
| Apparel | 131.3 | 129.6 | 130.1 | 126.8 | 129.2 | 132.5 | 133.3 | 132.2 | 128.3 | 124.5 | 125.3 | 130.4 | 132.8 | 131.8 | 127.8 |
| Men's and boys' apparel | 131.1 | 129.7 | 131.5 | 129.2 | 130.0 | 131.5 | 131.6 | 132.6 | 129.4 | 126.4 | 126.8 | 129.1 | 130.4 | 131.3 | 128.0 |
| Women's and girls' apparel | 123.3 | 121.5 | 121.8 | 116.0 | 120.0 | 125.9 | 126.7 | 124.4 | 119.2 | 113.9 | 115.6 | 124.2 | 127.9 | 124.8 | 119.7 |
| Infants' and toddlers' apparel[1] | 129.0 | 130.6 | 133.0 | 133.3 | 133.1 | 133.9 | 132.3 | 131.7 | 130.5 | 128.1 | 126.7 | 127.4 | 130.8 | 130.7 | 128.2 |
| Footwear | 125.7 | 123.8 | 123.7 | 121.6 | 122.1 | 124.7 | 126.7 | 126.1 | 123.9 | 120.3 | 120.7 | 124.9 | 125.3 | 125.4 | 123.8 |
| Transportation | 144.4 | 153.3 | 148.3 | 148.3 | 149.7 | 153.4 | 152.9 | 153.1 | 155.7 | 155.0 | 153.2 | 154.7 | 154.4 | 155.2 | 154.4 |
| Private transportation | 140.5 | 149.1 | 144.4 | 144.4 | 145.6 | 149.2 | 148.7 | 148.8 | 151.4 | 150.6 | 148.6 | 150.4 | 150.4 | 151.1 | 150.3 |
| New and used motor vehicles[2] | 100.1 | 100.8 | 101.1 | 100.8 | 100.3 | 100.4 | 100.8 | 101.0 | 100.8 | 100.6 | 100.4 | 100.4 | 100.8 | 101.5 | 102.1 |
| New vehicles | 142.9 | 142.8 | 143.6 | 143.3 | 143.0 | 143.3 | 143.5 | 143.3 | 142.9 | 142.5 | 141.9 | 141.4 | 141.6 | 142.7 | 143.6 |
| Used cars and trucks[1] | 152.0 | 155.8 | 155.0 | 153.9 | 153.0 | 153.0 | 154.0 | 155.4 | 155.7 | 155.3 | 155.2 | 156.2 | 157.9 | 159.3 | 160.2 |
| Motor fuel | 100.7 | 129.3 | 112.2 | 112.6 | 118.1 | 131.7 | 128.7 | 128.3 | 139.0 | 136.1 | 128.4 | 135.2 | 133.1 | 133.0 | 127.8 |
| Gasoline (all types) | 100.1 | 128.6 | 111.5 | 111.9 | 117.3 | 130.9 | 127.9 | 127.6 | 138.3 | 135.4 | 127.7 | 134.3 | 132.3 | 132.2 | 127.0 |
| Motor vehicle parts and equipment | 100.5 | 101.5 | 100.8 | 100.8 | 100.9 | 101.4 | 101.0 | 101.1 | 101.2 | 101.5 | 101.5 | 101.7 | 101.7 | 102.5 | 103.1 |
| Motor vehicle maintenance and repair | 171.9 | 177.3 | 173.8 | 174.6 | 175.2 | 175.7 | 175.9 | 176.3 | 176.8 | 177.2 | 178.2 | 178.7 | 179.4 | 179.9 | 179.9 |
| Public transportation | 197.7 | 209.6 | 201.2 | 199.5 | 204.2 | 209.8 | 209.2 | 210.4 | 212.6 | 213.7 | 215.7 | 213.0 | 208.0 | 209.1 | 209.5 |
| Medical care | 250.6 | 260.8 | 254.2 | 255.5 | 257.0 | 258.1 | 258.8 | 259.4 | 260.5 | 261.4 | 262.6 | 263.1 | 263.7 | 264.1 | 264.8 |
| Medical care commodities | 230.7 | 238.1 | 234.6 | 235.2 | 235.5 | 236.3 | 237.0 | 237.5 | 238.2 | 238.6 | 239.2 | 239.4 | 239.6 | 240.0 | 241.1 |
| Medical care services | 255.1 | 266.0 | 258.5 | 260.1 | 262.0 | 263.2 | 263.9 | 264.4 | 265.6 | 266.7 | 268.0 | 268.7 | 269.4 | 269.8 | 270.4 |
| Professional services | 229.2 | 137.7 | 231.7 | 233.1 | 234.9 | 236.1 | 236.6 | 237.1 | 237.9 | 238.3 | 238.9 | 239.3 | 239.7 | 239.8 | 240.3 |
| Hospital and related services | 299.5 | 317.3 | 306.3 | 308.4 | 310.5 | 311.5 | 312.7 | 313.5 | 315.6 | 318.1 | 321.3 | 322.5 | 323.6 | 324.7 | 325.3 |
| Recreation[2] | 102.1 | 103.3 | 102.0 | 102.3 | 102.5 | 102.9 | 102.9 | 103.1 | 103.4 | 103.7 | 103.9 | 103.8 | 103.8 | 103.7 | 103.7 |
| Video and audio[1,2] | 100.7 | 101.0 | 100.1 | 100.5 | 100.8 | 100.9 | 100.3 | 101.3 | 101.5 | 101.3 | 101.6 | 101.5 | 101.0 | 100.9 | 100.7 |
| Education and communication[2] | 101.2 | 102.5 | 102.3 | 102.7 | 102.2 | 102.0 | 101.8 | 101.8 | 101.5 | 102.0 | 102.8 | 102.9 | 103.6 | 103.2 | 103.6 |
| Education[2] | 107.0 | 112.5 | 109.3 | 110.2 | 110.6 | 110.6 | 110.7 | 110.9 | 111.5 | 111.8 | 113.0 | 114.9 | 115.3 | 115.4 | 115.5 |
| Educational books and supplies | 261.7 | 279.9 | 256.0 | 273.9 | 278.3 | 276.9 | 276.7 | 276.8 | 277.5 | 278.1 | 280.2 | 284.8 | 285.2 | 284.8 | 285.4 |
| Tuition, other school fees, and child care | 308.4 | 324.0 | 316.3 | 317.3 | 318.0 | 318.3 | 318.7 | 319.2 | 320.9 | 321.7 | 325.4 | 330.8 | 332.1 | 332.5 | 332.7 |
| Communication[1,2] | 96.0 | 93.6 | 95.9 | 96.0 | 94.7 | 94.3 | 93.8 | 93.7 | 92.6 | 93.3 | 93.7 | 92.1 | 93.1 | 92.3 | 93.0 |
| Information and information processing[1,2] | 95.5 | 92.8 | 95.4 | 95.5 | 94.1 | 93.6 | 93.1 | 93.0 | 91.8 | 92.5 | 93.0 | 91.3 | 92.3 | 91.5 | 92.2 |
| Telephone services[1,2] | 100.1 | 98.5 | 100.7 | 100.9 | 99.4 | 98.9 | 98.6 | 98.5 | 97.2 | 98.2 | 98.9 | 97.0 | 98.3 | 97.5 | 98.4 |
| Information and information processing other than telephone services[1,4] | 30.5 | 25.9 | 28.2 | 28.0 | 27.6 | 27.2 | 26.7 | 26.6 | 26.0 | 25.7 | 25.2 | 25.0 | 24.7 | 24.2 | 23.8 |
| Personal computers and peripheral equipment[1,2] | 53.5 | 41.1 | 47.2 | 46.4 | 45.1 | 44.2 | 42.7 | 42.4 | 41.2 | 40.3 | 39.5 | 38.9 | 38.3 | 37.3 | 36.5 |
| Other goods and services | 258.3 | 271.1 | 263.0 | 264.7 | 266.7 | 268.0 | 271.9 | 270.2 | 269.6 | 272.2 | 271.6 | 274.7 | 273.0 | 276.2 | 274.0 |
| Tobacco and smoking products | 355.8 | 394.9 | 369.1 | 375.1 | 383.0 | 387.3 | 404.4 | 393.5 | 388.5 | 400.7 | 394.1 | 408.0 | 396.7 | 411.0 | 396.6 |
| Personal care[1] | 161.1 | 165.6 | 162.9 | 163.4 | 163.8 | 164.3 | 164.8 | 165.1 | 165.4 | 165.7 | 166.2 | 166.6 | 167.0 | 167.4 | 167.8 |
| Personal care products[1] | 151.8 | 153.7 | 152.5 | 152.8 | 152.6 | 153.5 | 153.4 | 153.0 | 153.6 | 153.7 | 154.3 | 154.3 | 153.4 | 153.9 | 155.5 |
| Personal care services[1] | 171.4 | 178.1 | 174.3 | 174.9 | 175.6 | 176.2 | 176.2 | 177.3 | 177.9 | 178.2 | 179.3 | 179.9 | 180.3 | 180.6 | 181.3 |

## 28. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

| Series | Annual average | | 1999 | 2000 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
| Miscellaneous personal services | 243.0 | 252.3 | 246.6 | 247.6 | 248.9 | 249.4 | 250.9 | 251.7 | 252.0 | 252.9 | 253.6 | 254.0 | 255.1 | 255.7 | 255.7 |
| Commodity and service group: | | | | | | | | | | | | | | | |
| Commodities | 144.4 | 149.2 | 146.1 | 146.2 | 147.4 | 149.2 | 149.3 | 149.2 | 149.7 | 149.3 | 148.6 | 150.3 | 150.4 | 150.6 | 150.0 |
| Food and beverages | 164.6 | 168.4 | 165.9 | 166.6 | 166.8 | 167.1 | 167.2 | 167.8 | 167.9 | 169.4 | 169.2 | 169.4 | 169.6 | 169.5 | 170.5 |
| Commodities less food and beverages | 132.5 | 137.7 | 134.4 | 134.0 | 135.7 | 138.4 | 138.4 | 138.0 | 138.6 | 137.7 | 136.4 | 138.8 | 138.9 | 139.3 | 137.8 |
| Nondurables less food and beverages | 137.5 | 147.4 | 140.9 | 140.5 | 143.9 | 148.5 | 148.5 | 147.6 | 149.1 | 147.5 | 145.6 | 149.9 | 149.9 | 150.2 | 147.2 |
| Apparel | 131.3 | 129.6 | 130.1 | 126.8 | 129.2 | 132.5 | 133.3 | 132.2 | 128.3 | 124.5 | 125.3 | 130.4 | 132.8 | 131.8 | 127.8 |
| Nondurables less food, beverages, and apparel | 146.0 | 162.5 | 152.1 | 153.1 | 157.2 | 162.7 | 162.3 | 161.5 | 165.8 | 165.4 | 162.0 | 165.9 | 164.7 | 165.7 | 163.1 |
| Durables | 126.0 | 125.4 | 125.9 | 125.7 | 125.3 | 125.6 | 125.6 | 125.8 | 125.4 | 125.2 | 124.7 | 124.8 | 125.0 | 125.5 | 125.9 |
| Services | 188.8 | 195.3 | 190.5 | 191.6 | 192.4 | 193.3 | 193.5 | 193.8 | 195.3 | 196.3 | 197.0 | 197.2 | 197.6 | 197.6 | 198.0 |
| Rent of shelter[3] | 195.0 | 201.3 | 196.3 | 198.0 | 198.9 | 200.1 | 200.2 | 200.3 | 201.2 | 202.1 | 202.7 | 202.6 | 203.3 | 203.2 | 203.1 |
| Transporatation services | 190.7 | 196.1 | 192.8 | 193.0 | 193.7 | 195.0 | 195.2 | 195.7 | 196.1 | 196.5 | 197.4 | 197.2 | 197.0 | 198.0 | 198.3 |
| Other services | 223.1 | 229.9 | 226.5 | 227.4 | 227.4 | 227.8 | 228.0 | 228.4 | 228.7 | 229.9 | 231.3 | 231.5 | 232.6 | 232.4 | 233.0 |
| Special indexes: | | | | | | | | | | | | | | | |
| All items less food | 167.0 | 173.0 | 168.8 | 169.3 | 170.5 | 172.0 | 172.2 | 172.2 | 173.3 | 173.6 | 173.5 | 174.6 | 174.9 | 175.0 | 174.7 |
| All items less shelter | 160.2 | 165.7 | 162.1 | 162.3 | 163.3 | 164.8 | 164.9 | 165.1 | 166.0 | 166.2 | 166.0 | 167.4 | 167.5 | 167.7 | 167.5 |
| All items less medical care | 162.0 | 167.3 | 163.6 | 164.1 | 165.0 | 166.4 | 166.5 | 166.6 | 167.6 | 167.9 | 167.9 | 168.8 | 169.1 | 169.2 | 169.0 |
| Commodities less food | 134.0 | 139.2 | 135.9 | 135.6 | 137.2 | 139.9 | 139.9 | 139.4 | 140.1 | 139.2 | 138.0 | 140.3 | 140.4 | 140.8 | 139.3 |
| Nondurables less food | 139.4 | 149.1 | 142.8 | 142.4 | 145.7 | 150.1 | 150.1 | 149.3 | 150.7 | 149.3 | 147.5 | 151.5 | 151.6 | 151.8 | 149.0 |
| Nondurables less food and apparel | 147.5 | 162.9 | 153.2 | 154.2 | 158.0 | 163.0 | 162.7 | 161.9 | 166.0 | 165.7 | 162.6 | 166.2 | 165.1 | 166.0 | 163.6 |
| Nondurables | 151.2 | 158.2 | 153.6 | 153.7 | 155.6 | 158.1 | 158.2 | 158.0 | 158.8 | 158.4 | 157.6 | 160.0 | 160.1 | 160.2 | 159.1 |
| Services less rent of shelter[3] | 195.8 | 202.9 | 198.0 | 198.6 | 199.2 | 199.9 | 200.2 | 200.9 | 202.9 | 204.2 | 205.0 | 205.7 | 205.8 | 205.9 | 206.9 |
| Services less medical care services | 182.7 | 188.9 | 184.3 | 185.3 | 186.0 | 186.9 | 187.1 | 187.4 | 188.9 | 189.9 | 190.5 | 190.7 | 191.1 | 191.1 | 191.5 |
| Energy | 106.6 | 124.6 | 112.2 | 112.5 | 116.7 | 122.2 | 120.7 | 121.0 | 129.6 | 129.7 | 125.9 | 130.6 | 129.3 | 129.0 | 128.1 |
| All items less energy | 174.4 | 178.6 | 175.7 | 176.3 | 176.9 | 177.8 | 178.1 | 178.2 | 178.3 | 178.7 | 179.1 | 179.6 | 180.1 | 180.3 | 180.2 |
| All items less food and energy | 177.0 | 181.3 | 178.2 | 178.8 | 179.5 | 180.5 | 180.9 | 180.9 | 181.0 | 181.3 | 181.7 | 182.3 | 182.8 | 183.0 | 182.8 |
| Commodities less food and energy | 144.1 | 144.9 | 144.2 | 143.6 | 144.2 | 145.3 | 145.9 | 145.5 | 144.5 | 143.8 | 143.7 | 145.1 | 145.6 | 146.0 | 145.1 |
| Energy commodities | 100.0 | 129.5 | 111.8 | 112.8 | 120.6 | 131.7 | 128.4 | 127.9 | 137.6 | 135.0 | 127.9 | 135.2 | 133.6 | 133.8 | 129.3 |
| Services less energy | 195.7 | 202.1 | 197.7 | 198.9 | 199.7 | 200.7 | 200.9 | 201.2 | 201.9 | 202.7 | 203.5 | 203.5 | 204.1 | 204.2 | 204.4 |
| **CONSUMER PRICE INDEX FOR URBAN WAGE EARNERS AND CLERICAL WORKERS** | | | | | | | | | | | | | | | |
| All items | 163.2 | 168.9 | 165.1 | 165.6 | 166.5 | 167.9 | 168.0 | 168.2 | 169.2 | 169.4 | 169.3 | 170.4 | 170.6 | 170.9 | 170.7 |
| All items (1967 = 100) | 486.2 | 503.1 | 491.8 | 493.2 | 495.9 | 500.0 | 500.4 | 501.1 | 504.1 | 504.7 | 504.2 | 507.6 | 508.2 | 509.0 | 508.5 |
| Food and beverages | 163.8 | 167.7 | 165.2 | 165.9 | 166.1 | 166.4 | 166.5 | 167.2 | 167.3 | 168.0 | 168.6 | 168.8 | 169.0 | 168.8 | 169.8 |
| Food | 163.4 | 167.2 | 164.7 | 165.4 | 165.6 | 165.9 | 166.0 | 166.7 | 166.8 | 167.6 | 189.9 | 168.3 | 168.5 | 168.3 | 169.3 |
| Food at home | 163.0 | 166.8 | 164.2 | 165.1 | 165.1 | 165.3 | 165.4 | 166.4 | 166.3 | 167.3 | 156.8 | 168.1 | 168.1 | 167.8 | 169.1 |
| Cereals and bakery products | 184.7 | 188.0 | 185.7 | 185.5 | 185.8 | 185.9 | 186.9 | 188.4 | 187.3 | 189.2 | 161.0 | 188.4 | 189.9 | 188.6 | 190.4 |
| Meats, poultry, fish, and eggs | 147.6 | 154.1 | 149.4 | 149.8 | 150.8 | 152.0 | 152.5 | 153.5 | 154.6 | 155.4 | 202.5 | 156.6 | 156.4 | 155.3 | 156.3 |
| Dairy and related products[1] | 159.4 | 160.5 | 161.9 | 159.9 | 160.4 | 158.7 | 160.2 | 159.3 | 159.4 | 160.5 | 138.2 | 161.6 | 161.9 | 161.4 | 161.5 |
| Fruits and vegetables | 201.8 | 203.4 | 202.8 | 207.0 | 201.7 | 200.5 | 200.5 | 203.1 | 198.9 | 200.0 | 201.5 | 203.6 | 204.7 | 205.8 | 213.3 |
| Nonalcoholic beverages and beverage materials | 133.2 | 136.9 | 133.5 | 136.0 | 137.6 | 137.8 | 136.7 | 136.4 | 136.7 | 137.5 | 137.4 | 137.1 | 136.6 | 137.1 | 135.8 |
| Other foods at home | 152.8 | 155.1 | 152.7 | 153.7 | 153.8 | 154.5 | 153.4 | 154.9 | 155.6 | 156.0 | 156.2 | 156.1 | 155.3 | 155.4 | 155.8 |
| Sugar and sweets | 152.2 | 153.9 | 152.3 | 154.8 | 154.3 | 154.5 | 152.3 | 153.6 | 153.9 | 154.2 | 154.4 | 154.4 | 153.8 | 152.7 | 153.3 |
| Fats and oils | 147.9 | 147.2 | 144.7 | 146.8 | 145.2 | 145.7 | 144.5 | 146.9 | 146.4 | 147.9 | 148.6 | 148.5 | 149.4 | 146.3 | 149.9 |
| Other foods | 168.8 | 172.3 | 169.4 | 169.8 | 170.5 | 171.6 | 170.7 | 172.2 | 173.4 | 173.5 | 173.6 | 173.5 | 172.0 | 173.4 | 173.0 |
| Other miscellaneous foods[1,2] | 104.6 | 107.1 | 105.2 | 103.9 | 106.2 | 106.7 | 104.7 | 106.1 | 108.0 | 108.4 | 109.0 | 107.5 | 106.3 | 109.6 | 108.6 |
| Food away from home[1] | 165.0 | 169.0 | 166.8 | 167.1 | 167.6 | 167.9 | 168.1 | 168.3 | 168.6 | 169.1 | 169.5 | 170.0 | 170.3 | 170.5 | 170.8 |
| Other food away from home[1,2] | 105.1 | 109.2 | 106.9 | 107.4 | 107.8 | 107.8 | 108.3 | 108.5 | 108.4 | 108.8 | 109.6 | 110.4 | 110.9 | 111.2 | 111.4 |
| Alcoholic beverages | 168.8 | 173.8 | 171.0 | 171.6 | 172.2 | 172.8 | 172.9 | 172.9 | 173.6 | 174.4 | 174.7 | 174.4 | 174.8 | 175.6 | 175.8 |
| Housing | 160.0 | 165.4 | 161.1 | 162.0 | 162.9 | 163.4 | 163.6 | 163.9 | 165.5 | 166.4 | 166.6 | 167.3 | 167.5 | 167.6 | 168.1 |
| Shelter | 181.6 | 187.4 | 183.3 | 184.5 | 185.2 | 186.0 | 186.2 | 186.5 | 187.2 | 187.9 | 188.4 | 188.7 | 189.3 | 189.5 | 189.6 |
| Rent of primary residence | 177.1 | 183.4 | 179.9 | 180.7 | 181.1 | 181.5 | 181.8 | 182.2 | 182.7 | 183.4 | 184.1 | 184.8 | 185.6 | 186.2 | 187.0 |
| Lodging away from home[2] | 122.2 | 117.3 | 105.7 | 110.8 | 114.5 | 119.9 | 118.7 | 117.8 | 120.9 | 123.1 | 122.5 | 118.3 | 118.6 | 113.9 | 108.7 |
| Owners' equivalent rent of primary residence[3] | 175.7 | 180.8 | 177.8 | 178.6 | 179.0 | 179.2 | 179.6 | 179.9 | 180.4 | 180.8 | 181.3 | 181.9 | 182.4 | 183.0 | 183.5 |
| Tenants' and household insurance[1,2] | 101.6 | 103.9 | 102.4 | 102.6 | 102.6 | 102.8 | 103.3 | 104.0 | 104.1 | 104.4 | 104.2 | 104.4 | 104.4 | 104.7 | 104.9 |
| Fuels and utilities | 128.7 | 137.4 | 129.2 | 129.5 | 132.0 | 131.2 | 131.1 | 131.9 | 138.7 | 141.0 | 140.4 | 143.4 | 142.5 | 142.0 | 144.6 |
| Fuels | 113.0 | 121.8 | 113.5 | 113.6 | 116.3 | 115.4 | 115.2 | 116.0 | 123.3 | 125.7 | 125.0 | 128.2 | 127.2 | 126.5 | 129.3 |
| Fuel oil and other fuels | 91.7 | 128.8 | 106.0 | 114.0 | 144.5 | 129.6 | 123.0 | 120.9 | 120.2 | 120.1 | 120.1 | 133.1 | 136.7 | 139.3 | 144.1 |
| Gas (piped) and electricity | 120.4 | 127.5 | 119.8 | 119.4 | 120.1 | 120.2 | 120.5 | 121.6 | 129.9 | 132.5 | 131.8 | 134.4 | 133.0 | 132.1 | 134.8 |
| Household furnishings and operations | 124.7 | 125.5 | 124.2 | 124.5 | 124.6 | 125.3 | 125.6 | 125.5 | 125.3 | 125.7 | 125.7 | 126.1 | 125.8 | 126.0 | 125.6 |
| Apparel | 130.1 | 128.3 | 129.0 | 125.9 | 127.9 | 131.0 | 131.8 | 130.9 | 127.3 | 123.6 | 124.0 | 128.7 | 131.3 | 130.5 | 126.6 |
| Men's and boys' apparel | 131.2 | 129.7 | 131.6 | 129.3 | 129.9 | 131.5 | 131.5 | 132.7 | 129.5 | 126.6 | 126.8 | 128.8 | 130.3 | 131.3 | 128.0 |
| Women's and girls' apparel | 121.3 | 119.3 | 119.8 | 114.2 | 118.0 | 123.5 | 124.3 | 122.1 | 117.4 | 112.2 | 113.2 | 121.5 | 125.5 | 122.6 | 117.5 |
| Infants' and toddlers' apparel[1] | 130.3 | 132.3 | 134.8 | 134.9 | 134.7 | 135.7 | 134.1 | 133.4 | 132.0 | 129.8 | 128.4 | 129.0 | 132.6 | 132.7 | 130.0 |
| Footwear | 126.2 | 124.2 | 124.2 | 122.3 | 122.6 | 124.7 | 127.1 | 126.6 | 124.6 | 120.9 | 121.5 | 124.8 | 125.5 | 125.7 | 124.0 |
| Transportation | 143.4 | 152.8 | 147.6 | 147.7 | 149.1 | 152.9 | 152.2 | 152.5 | 155.5 | 154.4 | 152.3 | 154.2 | 154.0 | 154.9 | 153.9 |
| Private transportation | 140.7 | 150.1 | 145.0 | 145.1 | 146.4 | 150.1 | 149.5 | 149.7 | 152.8 | 151.6 | 149.3 | 151.4 | 151.3 | 152.2 | 151.2 |
| New and used motor vehicles[2] | 100.4 | 101.4 | 101.5 | 101.2 | 100.7 | 100.8 | 101.2 | 101.5 | 101.4 | 101.1 | 100.9 | 101.0 | 101.4 | 102.2 | 102.8 |

## 28. Continued—Consumer Price Indexes for All Urban Consumers and for Urban Wage Earners and Clerical Workers: U.S. city average, by expenditure category and commodity or service group

[1982–84 = 100, unless otherwise indicated]

| Series | Annual average | | 1999 | 2000 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000 | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
| New vehicles | 144.0 | 143.9 | 144.7 | 144.5 | 144.2 | 144.5 | 144.7 | 144.5 | 144.1 | 143.7 | 143.1 | 142.5 | 142.7 | 143.7 | 144.6 |
| Used cars and trucks[1] | 153.3 | 157.1 | 156.3 | 155.3 | 154.4 | 154.4 | 155.4 | 156.8 | 157.1 | 156.6 | 156.5 | 157.5 | 159.3 | 160.7 | 161.6 |
| Motor fuel | 100.8 | 129.5 | 112.3 | 112.9 | 118.6 | 132.0 | 128.5 | 128.5 | 140.1 | 136.2 | 128.0 | 135.3 | 133.1 | 133.2 | 127.7 |
| Gasoline (all types) | 100.2 | 128.8 | 111.7 | 112.3 | 117.9 | 131.2 | 127.8 | 127.9 | 139.4 | 135.5 | 127.3 | 134.6 | 132.3 | 132.4 | 126.9 |
| Motor vehicle parts and equipment | 100.0 | 100.9 | 100.2 | 100.3 | 100.5 | 100.9 | 100.6 | 100.5 | 100.5 | 100.8 | 100.7 | 100.9 | 101.0 | 101.8 | 102.3 |
| Motor vehicle maintenance and repair | 173.3 | 178.8 | 175.2 | 176.1 | 176.6 | 177.2 | 177.4 | 177.8 | 178.3 | 178.7 | 179.6 | 180.2 | 180.9 | 181.4 | 181.5 |
| Public transportation | 193.1 | 203.4 | 196.0 | 194.8 | 198.8 | 203.4 | 202.9 | 203.9 | 205.5 | 206.9 | 208.7 | 206.4 | 202.4 | 203.2 | 203.7 |
| Medical care | 249.7 | 259.9 | 253.2 | 254.5 | 256.2 | 257.3 | 258.0 | 258.5 | 259.7 | 260.6 | 261.7 | 262.2 | 262.8 | 263.1 | 263.8 |
| Medical care commodities | 226.8 | 233.6 | 230.2 | 230.7 | 231.0 | 231.8 | 232.4 | 232.9 | 233.7 | 234.2 | 234.6 | 235.0 | 235.2 | 235.5 | 236.5 |
| Medical care services | 254.9 | 265.9 | 258.4 | 259.9 | 261.9 | 263.1 | 263.8 | 264.4 | 265.6 | 266.6 | 267.9 | 268.5 | 269.2 | 269.4 | 270.1 |
| Professional services | 230.8 | 239.6 | 233.4 | 234.8 | 236.7 | 238.0 | 238.6 | 239.0 | 239.9 | 240.3 | 240.9 | 241.3 | 241.8 | 241.7 | 242.3 |
| Hospital and related services | 295.5 | 313.2 | 302.1 | 304.1 | 306.4 | 307.5 | 308.7 | 309.5 | 311.7 | 314.2 | 317.1 | 318.2 | 319.2 | 320.3 | 320.9 |
| Recreation[2] | 101.3 | 102.4 | 101.2 | 101.4 | 101.6 | 102.0 | 102.0 | 102.3 | 102.5 | 102.7 | 102.9 | 102.8 | 102.8 | 102.7 | 102.6 |
| Video and audio[1,2] | 100.5 | 100.7 | 99.8 | 100.2 | 100.4 | 100.6 | 100.0 | 101.0 | 101.2 | 100.9 | 101.3 | 101.1 | 100.7 | 100.6 | 100.3 |
| Education and communication[2] | 101.5 | 102.7 | 102.5 | 103.0 | 102.5 | 102.2 | 102.1 | 102.1 | 101.7 | 102.2 | 103.0 | 102.9 | 103.7 | 103.2 | 103.7 |
| Education[2] | 107.2 | 112.8 | 109.4 | 110.5 | 110.9 | 111.0 | 111.1 | 111.3 | 111.8 | 112.1 | 113.2 | 115.1 | 115.4 | 115.6 | 115.7 |
| Educational books and supplies | 264.1 | 283.3 | 256.9 | 276.6 | 281.3 | 280.0 | 279.9 | 280.0 | 280.9 | 281.5 | 283.6 | 288.6 | 289.0 | 288.6 | 289.2 |
| Tuition, other school fees, and child care | 302.8 | 318.2 | 310.4 | 311.7 | 312.7 | 312.8 | 313.4 | 313.8 | 315.4 | 316.2 | 319.2 | 324.7 | 325.7 | 326.3 | 326.5 |
| Communication[1,2] | 96.9 | 94.6 | 97.0 | 97.1 | 95.7 | 95.3 | 94.8 | 94.7 | 93.6 | 94.3 | 94.8 | 93.1 | 94.2 | 93.3 | 94.1 |
| Information and information processing[1,2] | 96.5 | 94.1 | 96.6 | 96.7 | 95.3 | 94.8 | 94.4 | 94.3 | 93.0 | 93.9 | 94.4 | 92.6 | 93.8 | 92.8 | 93.6 |
| Telephone services[1,2] | 100.2 | 98.7 | 100.9 | 101.1 | 99.6 | 99.1 | 98.8 | 98.7 | 97.4 | 98.4 | 99.1 | 97.1 | 98.6 | 97.6 | 98.6 |
| Information and information processing other than telephone services[1,4] | 31.6 | 26.8 | 29.3 | 28.9 | 28.6 | 28.2 | 27.6 | 27.5 | 27.0 | 26.6 | 26.1 | 25.9 | 25.5 | 25.1 | 24.6 |
| Personal computers and peripheral equipment[1,2] | 53.1 | 40.5 | 46.9 | 45.7 | 44.5 | 43.6 | 42.0 | 41.8 | 40.7 | 39.8 | 39.1 | 38.5 | 37.8 | 36.7 | 35.9 |
| Other goods and services | 261.9 | 276.5 | 267.3 | 269.3 | 271.7 | 273.3 | 278.0 | 275.4 | 274.5 | 277.9 | 276.8 | 280.9 | 278.2 | 282.3 | 279.2 |
| Tobacco and smoking products | 356.2 | 395.2 | 369.7 | 375.7 | 383.6 | 387.8 | 404.9 | 393.7 | 388.7 | 400.9 | 394.2 | 408.2 | 397.0 | 411.3 | 396.9 |
| Personal care[1] | 161.3 | 165.5 | 163.1 | 163.5 | 163.9 | 164.3 | 164.6 | 164.9 | 165.3 | 165.5 | 166.1 | 166.5 | 166.8 | 167.1 | 167.7 |
| Personal care products[1] | 152.5 | 154.2 | 153.1 | 153.4 | 153.2 | 154.1 | 153.9 | 153.4 | 154.0 | 154.1 | 155.0 | 155.1 | 153.9 | 154.2 | 155.8 |
| Personal care services[1] | 171.7 | 178.6 | 174.7 | 175.3 | 176.1 | 176.6 | 176.6 | 177.7 | 178.3 | 178.6 | 179.7 | 180.3 | 180.8 | 181.1 | 181.7 |
| Miscellaneous personal services | 243.1 | 251.9 | 246.7 | 247.6 | 248.9 | 249.4 | 250.4 | 251.2 | 251.4 | 252.2 | 253.0 | 253.4 | 254.5 | 255.1 | 255.3 |
| Commodity and service group: | | | | | | | | | | | | | | | |
| Commodities | 144.7 | 149.8 | 146.6 | 146.6 | 147.8 | 149.8 | 149.9 | 149.9 | 150.6 | 150.1 | 149.3 | 151.0 | 151.0 | 151.4 | 150.6 |
| Food and beverages | 163.8 | 167.7 | 165.2 | 165.9 | 166.1 | 166.4 | 166.5 | 167.2 | 167.3 | 168.0 | 168.6 | 168.8 | 169.0 | 168.8 | 169.8 |
| Commodities less food and beverages | 133.2 | 139.0 | 135.4 | 135.1 | 136.8 | 139.6 | 139.6 | 139.3 | 140.3 | 139.2 | 137.7 | 140.2 | 140.2 | 140.8 | 139.1 |
| Nondurables less food and beverages | 138.1 | 149.1 | 142.0 | 141.7 | 145.1 | 150.2 | 150.2 | 149.4 | 151.5 | 149.7 | 147.2 | 151.8 | 151.6 | 152.1 | 148.6 |
| Apparel | 130.1 | 128.3 | 129.0 | 125.9 | 127.9 | 131.0 | 131.8 | 130.9 | 127.3 | 123.6 | 124.0 | 128.7 | 131.3 | 130.5 | 126.6 |
| Nondurables less food, beverages, and apparel | 147.2 | 165.3 | 153.9 | 155.0 | 159.3 | 165.7 | 165.2 | 164.4 | 169.6 | 168.7 | 164.6 | 169.3 | 167.6 | 168.8 | 165.5 |
| Durables | 126.0 | 125.8 | 126.3 | 126.0 | 125.6 | 125.8 | 126.0 | 126.2 | 125.9 | 125.6 | 125.2 | 125.3 | 125.6 | 126.2 | 126.6 |
| Services | 185.3 | 191.6 | 187.2 | 187.9 | 188.5 | 189.2 | 189.4 | 189.8 | 191.2 | 192.2 | 193.0 | 193.4 | 193.9 | 194.0 | 194.5 |
| Rent of shelter[3] | 174.9 | 180.5 | 176.5 | 177.7 | 178.4 | 179.1 | 179.3 | 179.6 | 180.3 | 181.0 | 181.5 | 181.7 | 182.3 | 182.5 | 182.6 |
| Transporatation services | 187.9 | 192.9 | 189.9 | 190.2 | 190.8 | 191.8 | 192.0 | 192.4 | 192.6 | 193.0 | 193.8 | 193.7 | 193.9 | 195.0 | 195.2 |
| Other services | 219.6 | 225.9 | 222.9 | 223.8 | 223.7 | 224.0 | 224.2 | 224.6 | 224.7 | 225.9 | 227.3 | 227.3 | 228.4 | 228.1 | 228.9 |
| Special indexes: | | | | | | | | | | | | | | | |
| All items less food | 163.1 | 169.1 | 165.1 | 165.4 | 166.4 | 168.0 | 168.2 | 168.3 | 169.5 | 169.6 | 169.4 | 170.7 | 170.9 | 171.3 | 170.9 |
| All items less shelter | 158.1 | 163.8 | 160.1 | 160.3 | 161.3 | 162.8 | 163.0 | 163.1 | 164.3 | 164.3 | 163.9 | 165.4 | 165.5 | 165.7 | 165.5 |
| All items less medical care | 159.2 | 164.7 | 161.1 | 161.4 | 162.3 | 163.6 | 163.8 | 164.0 | 165.0 | 165.1 | 165.0 | 166.2 | 166.4 | 166.6 | 166.4 |
| Commodities less food | 134.6 | 140.4 | 136.8 | 136.5 | 138.2 | 141.0 | 141.0 | 140.7 | 141.7 | 140.6 | 139.1 | 141.6 | 141.6 | 142.2 | 140.6 |
| Nondurables less food | 140.0 | 150.7 | 143.8 | 143.6 | 146.8 | 151.7 | 151.7 | 150.9 | 152.9 | 151.2 | 148.9 | 153.3 | 153.1 | 153.6 | 150.3 |
| Nondurables less food and apparel | 148.4 | 165.4 | 154.7 | 155.8 | 159.8 | 165.7 | 165.3 | 164.5 | 169.4 | 168.7 | 164.9 | 169.2 | 167.7 | 168.8 | 165.8 |
| Nondurables | 151.3 | 158.9 | 154.0 | 154.2 | 156.0 | 158.8 | 158.9 | 158.8 | 159.9 | 159.4 | 158.3 | 160.8 | 160.8 | 161.0 | 159.7 |
| Services less rent of shelter[3] | 174.1 | 180.1 | 175.9 | 176.4 | 176.9 | 177.4 | 177.7 | 178.2 | 180.2 | 181.3 | 181.9 | 182.5 | 182.7 | 182.8 | 183.7 |
| Services less medical care services | 179.5 | 185.4 | 181.2 | 181.9 | 182.4 | 183.1 | 183.3 | 183.7 | 185.1 | 186.0 | 186.6 | 187.2 | 187.6 | 187.7 | 188.3 |
| Energy | 106.1 | 124.8 | 112.1 | 112.5 | 116.7 | 122.9 | 121.0 | 121.5 | 130.9 | 130.1 | 125.7 | 130.9 | 129.3 | 129.0 | 127.6 |
| All items less energy | 171.1 | 175.1 | 172.5 | 172.8 | 173.3 | 174.1 | 174.5 | 174.6 | 174.6 | 174.9 | 175.3 | 176.0 | 176.5 | 176.8 | 176.8 |
| All items less food and energy | 173.1 | 177.1 | 174.5 | 174.8 | 175.3 | 176.2 | 176.7 | 176.7 | 176.6 | 176.8 | 177.2 | 178.0 | 178.6 | 179.0 | 178.7 |
| Commodities less food and energy | 144.3 | 145.4 | 144.6 | 144.1 | 144.6 | 145.6 | 146.4 | 146.0 | 145.0 | 144.5 | 144.2 | 145.7 | 146.1 | 146.7 | 145.8 |
| Energy commodities | 100.3 | 129.7 | 112.1 | 113.1 | 120.4 | 132.0 | 128.3 | 128.3 | 139.1 | 135.4 | 127.7 | 135.4 | 133.5 | 133.8 | 128.9 |
| Services less energy | 192.6 | 198.7 | 194.7 | 195.5 | 196.2 | 196.9 | 197.1 | 197.5 | 198.0 | 198.8 | 199.5 | 200.0 | 200.6 | 200.8 | 201.1 |

[1] Not seasonally adjusted.

[2] Indexes on a December 1997 = 100 base.

[3] Indexes on a December 1982 = 100 base.

[4] Indexes on a December 1988 = 100 base.

– Data not available.

NOTE: Index applies to a month as a whole, not to any specific date.

## 29. Consumer Price Index: U.S. city average and available local area data: all items

[1982–84 = 100, unless otherwise indicated]

| Area | Pricing schedule[1] | All Urban Consumers | | | | | | | Urban Wage Earners | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1999 | | 2000 | | | | | 1999 | | 2000 | | | | |
| | | Nov. | Dec. | Aug. | Sept. | Oct. | Nov. | Dec. | Nov. | Dec. | Aug. | Sept. | Oct. | Nov. | Dec. |
| U.S. city average | M | 168.3 | 168.3 | 172.8 | 173.7 | 174.0 | 174.1 | 174.0 | 165.1 | 165.1 | 169.3 | 170.4 | 170.6 | 170.9 | 170.7 |
| **Region and area size[2]** | | | | | | | | | | | | | | | |
| Northeast urban | M | 175.5 | 175.5 | 179.9 | 180.7 | 181.2 | 181.5 | 181.3 | 172.6 | 172.6 | 176.6 | 177.6 | 178.0 | 178.4 | 178.3 |
| Size A—More than 1,500,000 | M | 176.5 | 176.3 | 180.8 | 181.7 | 182.1 | 182.4 | 182.3 | 172.7 | 172.4 | 176.7 | 177.7 | 178.0 | 178.3 | 178.2 |
| Size B/C—50,000 to 1,500,000[3] | M | 105.1 | 105.4 | 108.0 | 108.3 | 108.8 | 108.9 | 108.8 | 105.0 | 105.2 | 107.4 | 107.9 | 108.4 | 108.6 | 108.6 |
| Midwest urban[4] | M | 164.6 | 164.4 | 168.2 | 170.0 | 170.1 | 170.3 | 170.2 | 160.9 | 160.7 | 164.3 | 166.4 | 166.4 | 166.8 | 166.5 |
| Size A—More than 1,500,000 | M | 165.6 | 165.5 | 170.0 | 171.5 | 171.5 | 171.7 | 171.6 | 161.0 | 161.1 | 165.3 | 167.0 | 166.9 | 167.2 | 167.0 |
| Size B/C—50,000 to 1,500,000[3] | M | 105.6 | 105.3 | 107.1 | 108.6 | 108.8 | 108.9 | 108.7 | 105.5 | 105.3 | 106.9 | 108.7 | 108.7 | 109.1 | 108.8 |
| Size D—Nonmetropolitan (less than 50,000) | M | 159.3 | 158.9 | 162.5 | 164.5 | 164.9 | 165.0 | 164.9 | 157.6 | 157.3 | 160.9 | 163.0 | 163.4 | 163.7 | 163.5 |
| South urban | M | 163.5 | 163.6 | 168.0 | 168.5 | 168.5 | 168.6 | 168.4 | 161.8 | 162.0 | 166.1 | 166.8 | 166.8 | 166.9 | 166.7 |
| Size A—More than 1,500,000 | M | 162.9 | 163.0 | 167.9 | 168.4 | 168.6 | 168.5 | 168.4 | 160.6 | 160.9 | 165.5 | 166.1 | 166.3 | 166.2 | 166.2 |
| Size B/C—50,000 to 1,500,000[3] | M | 105.1 | 105.2 | 107.8 | 108.1 | 108.1 | 108.2 | 108.1 | 104.9 | 105.0 | 107.5 | 107.9 | 107.9 | 108.1 | 108.0 |
| Size D—Nonmetropolitan (less than 50,000) | M | 164.1 | 163.5 | 167.8 | 168.2 | 167.6 | 167.3 | 167.1 | 165.0 | 164.6 | 168.7 | 169.2 | 168.8 | 168.6 | 168.4 |
| West urban | M | 170.4 | 170.5 | 175.9 | 176.6 | 177.2 | 177.2 | 177.1 | 166.2 | 166.4 | 171.2 | 172.1 | 172.7 | 172.8 | 172.8 |
| Size A—More than 1,500,000 | M | 171.6 | 171.7 | 177.6 | 178.4 | 179.0 | 178.8 | 179.0 | 165.7 | 165.8 | 171.2 | 172.1 | 172.7 | 172.7 | 172.9 |
| Size B/C—50,000 to 1,500,000[3] | M | 105.5 | 105.7 | 108.3 | 108.8 | 109.0 | 109.2 | 108.9 | 105.3 | 105.5 | 108.0 | 108.6 | 108.9 | 109.1 | 108.7 |
| Size classes: | | | | | | | | | | | | | | | |
| A[5] | M | 152.5 | 152.5 | 157.0 | 157.8 | 158.1 | 158.2 | 158.1 | 151.2 | 151.2 | 155.4 | 156.4 | 156.6 | 156.8 | 156.8 |
| B/C[3] | M | 105.3 | 105.3 | 107.8 | 108.3 | 108.5 | 108.7 | 108.5 | 105.1 | 105.2 | 107.4 | 108.2 | 108.3 | 108.6 | 108.4 |
| D | M | 164.2 | 163.7 | 167.6 | 168.7 | 168.7 | 168.6 | 168.5 | 163.5 | 163.1 | 166.8 | 167.9 | 168.1 | 168.1 | 167.9 |
| **Selected local areas[6]** | | | | | | | | | | | | | | | |
| Chicago–Gary–Kenosha, IL–IN–WI | M | 169.3 | 169.2 | 173.7 | 174.8 | 175.4 | 176.0 | 175.8 | 163.7 | 163.7 | 168.0 | 169.2 | 169.8 | 170.4 | 170.3 |
| Los Angeles–Riverside–Orange County, CA | M | 167.1 | 167.3 | 172.2 | 173.3 | 173.8 | 173.5 | 173.5 | 160.6 | 160.9 | 165.3 | 166.3 | 166.9 | 166.6 | 166.7 |
| New York, NY–Northern NJ–Long Island, NY–NJ–CT–PA | M | 178.8 | 178.6 | 183.1 | 184.4 | 184.6 | 184.6 | 184.2 | 174.6 | 174.3 | 178.5 | 179.9 | 180.2 | 180.1 | 180.0 |
| Boston–Brockton–Nashua, MA–NH–ME–CT | 1 | 179.2 | – | – | 184.3 | – | 187.4 | – | 177.8 | – | - | 183.2 | – | 186.2 | – |
| Cleveland–Akron, OH | 1 | 163.8 | – | – | 170.5 | – | 169.4 | – | 156.1 | – | - | 162.8 | – | 161.6 | – |
| Dallas–Ft Worth, TX | 1 | 160.1 | – | – | 166.9 | – | 166.8 | – | 159.8 | – | - | 166.8 | – | 166.6 | – |
| Washington–Baltimore, DC–MD–VA–WV[7] | 1 | 105.0 | – | – | 108.7 | – | 108.5 | – | 104.9 | – | - | 108.7 | – | 108.4 | – |
| Atlanta, GA | 2 | – | 167.0 | 172.1 | – | 171.9 | – | 171.9 | – | 164.6 | 169.6 | – | 169.6 | – | 169.7 |
| Detroit–Ann Arbor–Flint, MI | 2 | – | 165.6 | 170.1 | – | 171.9 | – | 171.7 | – | 160.4 | 164.6 | – | 166.5 | – | 166.2 |
| Houston–Galveston–Brazoria, TX | 2 | – | 150.3 | 154.4 | – | 157.1 | – | 156.2 | – | 149.2 | 153.1 | – | 155.4 | – | 154.9 |
| Miami–Ft. Lauderdale, FL | 2 | – | 164.8 | 168.4 | – | 169.6 | – | 169.5 | – | 162.7 | 165.8 | – | 167.1 | – | 167.2 |
| Philadelphia–Wilmington–Atlantic City, PA–NJ–DE–MD | 2 | – | 172.9 | 177.5 | – | 177.9 | – | 177.5 | – | 172.8 | 177.1 | – | 177.2 | – | 177.0 |
| San Francisco–Oakland–San Jose, CA | 2 | – | 174.5 | 181.7 | – | 183.4 | – | 184.1 | – | 170.9 | 177.8 | – | 179.3 | – | 180.2 |
| Seattle–Tacoma–Bremerton, WA | 2 | – | 174.4 | 180.3 | – | 182.1 | – | 181.5 | – | 170.1 | 175.4 | – | 177.5 | – | 177.0 |

[1] Foods, fuels, and several other items priced every month in all areas; most other goods and services priced as indicated:
M—Every month.
1—January, March, May, July, September, and November.
2—February, April, June, August, October, and December.

[2] Regions defined as the four Census regions.

[3] Indexes on a December 1996 = 100 base.

[4] The "North Central" region has been renamed the "Midwest" region by the Census Bureau. It is composed of the same geographic entities.

[5] Indexes on a December 1986 = 100 base.

[6] In addition, the following metropolitan areas are published semiannually and appear in tables 34 and 39 of the January and July issues of the *CPI Detailed Report*: Anchorage, AK; Cincinnati–Hamilton, OH–KY–IN; Denver–Boulder–Greeley, CO; Honolulu, HI; Kansas City, MO–KS; Milwaukee–Racine, WI; Minneapolis–St. Paul, MN–WI; Pittsburgh, PA; Portland–Salem, OR–WA; St Louis, MO–IL; San Diego, CA; Tampa–St. Petersburg–Clearwater, FL.

[7] Indexes on a November 1996 = 100 base.

– Data not available.

NOTE: Local area CPI indexes are byproducts of the national CPI program. Each local index has a smaller sample size and is, therefore, subject to substantially more sampling and other measurement error. As a result, local area indexes show greater volatility than the national index, although their long-term trends are similar. Therefore, the Bureau of Labor Statistics strongly urges users to consider adopting the national average CPI for use in their escalator clauses. Index applies to a month as a whole, not to any specific date.

## 30. Annual data: Consumer Price Index, U.S. city average, all items and major groups

[1982–84 = 100]

| Series | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|---|
| Consumer Price Index for All Urban Consumers: | | | | | | | | | |
| All items: | | | | | | | | | |
| Index | 140.3 | 144.5 | 148.2 | 152.4 | 156.9 | 160.5 | 163.0 | 166.6 | 172.2 |
| Percent change | 3.0 | 3.0 | 2.6 | 2.8 | 3.0 | 2.3 | 1.6 | 2.2 | 3.4 |
| Food and beverages: | | | | | | | | | |
| Index | 138.7 | 141.6 | 144.9 | 148.9 | 153.7 | 157.7 | 161.1 | 164.6 | 168.4 |
| Percent change | 1.4 | 2.1 | 2.3 | 2.8 | 3.2 | 2.6 | 2.2 | 2.2 | 2.3 |
| Housing: | | | | | | | | | |
| Index | 137.5 | 141.2 | 144.8 | 148.5 | 152.8 | 156.8 | 160.4 | 163.9 | 169.6 |
| Percent change | 2.9 | 2.7 | 2.5 | 2.6 | 2.9 | 2.6 | 2.3 | 2.2 | 3.5 |
| Apparel: | | | | | | | | | |
| Index | 131.9 | 133.7 | 133.4 | 132.0 | 131.7 | 132.9 | 133.0 | 131.3 | 129.6 |
| Percent change | 2.5 | 1.4 | –.2 | –1.0 | –.2 | .9 | .1 | –1.3 | –1.3 |
| Transportation: | | | | | | | | | |
| Index | 126.5 | 130.4 | 134.3 | 139.1 | 143.0 | 144.3 | 141.6 | 144.4 | 153.3 |
| Percent change | 2.2 | 3.1 | 3.0 | 3.6 | 2.8 | 0.9 | –1.9 | 2.0 | 6.2 |
| Medical care: | | | | | | | | | |
| Index | 190.1 | 201.4 | 211.0 | 220.5 | 228.2 | 234.6 | 242.1 | 250.6 | 260.8 |
| Percent change | 7.4 | 5.9 | 4.8 | 4.5 | 3.5 | 2.8 | 3.2 | 3.5 | 4.1 |
| Other goods and services: | | | | | | | | | |
| Index | 183.3 | 192.9 | 198.5 | 206.9 | 215.4 | 224.8 | 237.7 | 258.3 | 271.1 |
| Percent change | 6.8 | 5.2 | 2.9 | 4.2 | 4.1 | 4.4 | 5.7 | 8.7 | 5.0 |
| Consumer Price Index for Urban Wage Earners and Clerical Workers: | | | | | | | | | |
| All items: | | | | | | | | | |
| Index | 138.2 | 142.1 | 145.6 | 149.8 | 154.1 | 157.6 | 159.7 | 163.2 | 168.9 |
| Percent change | 2.9 | 2.8 | 2.5 | 2.9 | 2.9 | 2.3 | 1.3 | 2.2 | 3.5 |

## 31. Producer Price Indexes, by stage of processing

[1982 = 100]

| Grouping | Annual average | | 1999 | 2000 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1999 | 2000[p] | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
| **Finished goods** | 133.0 | 138.0 | 134.9 | 134.7 | 136.0 | 136.8 | 136.7 | 137.3 | 138.6 | 138.6 | 138.2 | 139.4 | 140.0 | 139.9 | 139.7 |
| Finished consumer goods | 132.0 | 138.1 | 134.3 | 133.9 | 135.7 | 136.7 | 136.5 | 137.4 | 139.1 | 139.0 | 138.6 | 140.1 | 140.5 | 140.4 | 140.1 |
| Finished consumer foods | 135.1 | 137.1 | 135.6 | 135.0 | 136.0 | 136.0 | 137.3 | 138.2 | 137.6 | 137.5 | 137.2 | 137.4 | 137.8 | 138.1 | 137.9 |
| Finshed consumer goods excluding foods | 130.5 | 138.4 | 133.6 | 133.3 | 135.4 | 136.8 | 136.0 | 136.9 | 139.6 | 139.5 | 139.0 | 141.1 | 141.5 | 141.2 | 140.8 |
| Nondurable goods less food | 127.9 | 138.6 | 131.7 | 131.4 | 134.3 | 136.4 | 135.3 | 136.5 | 140.5 | 140.5 | 140.0 | 143.0 | 142.4 | 142.1 | 141.5 |
| Durable goods | 133.0 | 133.9 | 134.4 | 134.1 | 133.9 | 133.8 | 133.9 | 133.8 | 133.4 | 133.1 | 132.7 | 132.5 | 135.1 | 135.0 | 135.3 |
| Capital equipment | 137.6 | 138.8 | 138.3 | 138.4 | 138.5 | 138.5 | 138.5 | 138.6 | 138.5 | 138.6 | 138.4 | 138.6 | 139.8 | 139.8 | 139.9 |
| **Intermediate materials, supplies, and components** | 123.2 | 129.1 | 125.4 | 125.9 | 126.9 | 127.8 | 128.0 | 128.3 | 129.8 | 130.3 | 129.9 | 131.1 | 130.8 | 130.5 | 130.6 |
| Materials and components for manufacturing | 124.6 | 128.1 | 125.9 | 126.4 | 127.0 | 127.6 | 128.2 | 128.5 | 128.6 | 128.9 | 128.6 | 128.5 | 128.5 | 128.1 | 128.1 |
| Materials for food manufacturing | 120.8 | 119.2 | 118.2 | 117.6 | 117.5 | 118.1 | 119.6 | 120.5 | 120.6 | 120.5 | 119.4 | 119.0 | 119.1 | 118.8 | 119.8 |
| Materials for nondurable manufacturing | 124.9 | 132.7 | 128.2 | 128.6 | 129.7 | 131.3 | 132.3 | 133.3 | 133.7 | 134.5 | 133.9 | 133.6 | 133.8 | 133.7 | 133.5 |
| Materials for durable manufacturing | 125.1 | 129.1 | 127.2 | 128.6 | 129.6 | 129.7 | 130.0 | 129.6 | 129.4 | 129.4 | 129.0 | 129.3 | 129.2 | 127.7 | 128.0 |
| Components for manufacturing | 125.7 | 126.2 | 125.8 | 125.9 | 125.9 | 126.0 | 126.1 | 126.0 | 126.2 | 126.3 | 126.3 | 126.4 | 126.2 | 126.2 | 126.1 |
| Materials and components for construction | 148.9 | 150.7 | 149.8 | 150.4 | 150.8 | 151.3 | 151.6 | 151.0 | 151.2 | 150.8 | 150.4 | 150.3 | 150.2 | 149.9 | 149.9 |
| Processed fuels and lubricants | 84.6 | 102.0 | 90.6 | 91.5 | 94.8 | 97.4 | 95.7 | 96.5 | 103.3 | 105.0 | 104.5 | 110.5 | 108.9 | 108.3 | 108.3 |
| Containers | 142.5 | 151.6 | 146.5 | 147.2 | 147.2 | 148.1 | 151.6 | 152.7 | 153.3 | 153.3 | 153.0 | 153.3 | 153.4 | 153.2 | 153.0 |
| Supplies | 134.2 | 136.8 | 135.1 | 135.2 | 135.6 | 136.0 | 136.4 | 136.7 | 137.1 | 137.3 | 137.0 | 137.4 | 137.6 | 137.6 | 138.1 |
| **Crude materials for further processing** | 98.2 | 119.8 | 103.5 | 105.8 | 110.3 | 112.9 | 111.3 | 115.9 | 125.6 | 122.7 | 118.3 | 126.0 | 128.3 | 125.5 | 136.2 |
| Foodstuffs and feedstuffs | 98.7 | 100.2 | 96.9 | 96.5 | 97.6 | 101.4 | 103.4 | 104.9 | 101.9 | 99.3 | 95.5 | 97.6 | 99.5 | 100.5 | 103.9 |
| Crude nonfood materials | 94.3 | 129.0 | 104.3 | 108.3 | 115.1 | 116.7 | 112.7 | 119.3 | 137.3 | 134.4 | 129.7 | 141.0 | 143.5 | 138.2 | 153.5 |
| **Special groupings:** | | | | | | | | | | | | | | | |
| Finished goods, excluding foods | 132.3 | 138.1 | 134.6 | 134.5 | 135.9 | 136.9 | 136.4 | 137.0 | 138.8 | 138.8 | 138.4 | 139.9 | 140.5 | 140.3 | 140.1 |
| Finished energy goods | 78.8 | 94.2 | 83.6 | 83.8 | 87.5 | 90.9 | 89.2 | 90.9 | 97.7 | 97.3 | 95.9 | 100.6 | 99.7 | 99.3 | 97.9 |
| Finished goods less energy | 143.0 | 144.8 | 144.0 | 143.6 | 144.3 | 144.3 | 144.6 | 145.0 | 144.7 | 144.7 | 144.7 | 144.8 | 145.8 | 145.9 | 145.9 |
| Finished consumer goods less energy | 145.2 | 147.3 | 146.4 | 145.8 | 146.7 | 146.7 | 147.2 | 147.6 | 147.3 | 147.3 | 147.3 | 147.5 | 148.3 | 148.4 | 148.5 |
| Finished goods less food and energy | 146.1 | 147.9 | 147.4 | 147.0 | 147.5 | 147.5 | 147.5 | 147.7 | 147.5 | 147.6 | 147.7 | 147.8 | 149.0 | 148.9 | 149.1 |
| Finished consumer goods less food and energy | 151.7 | 153.9 | 153.4 | 152.8 | 153.6 | 153.6 | 153.5 | 153.7 | 153.6 | 153.5 | 153.8 | 154.0 | 155.1 | 155.0 | 155.3 |
| Consumer nondurable goods less food and energy | 166.3 | 169.7 | 168.2 | 167.3 | 169.0 | 169.1 | 168.9 | 169.3 | 169.4 | 169.6 | 170.4 | 170.9 | 170.8 | 170.7 | 171.0 |
| Intermediate materials less foods and feeds | 123.9 | 130.1 | 126.2 | 126.8 | 127.8 | 128.8 | 128.9 | 129.2 | 130.7 | 131.2 | 131.0 | 132.2 | 131.8 | 131.5 | 131.5 |
| Intermediate foods and feeds | 111.1 | 111.7 | 109.7 | 109.3 | 110.0 | 111.0 | 111.9 | 113.4 | 113.4 | 112.7 | 110.6 | 111.1 | 111.6 | 111.6 | 113.5 |
| Intermediate energy goods | 84.3 | 101.7 | 90.3 | 91.2 | 94.5 | 97.1 | 95.4 | 96.3 | 103.0 | 104.6 | 104.2 | 110.1 | 108.5 | 107.9 | 107.9 |
| Intermediate goods less energy | 131.7 | 135.0 | 133.0 | 133.5 | 133.9 | 134.5 | 135.1 | 135.3 | 135.5 | 135.7 | 135.3 | 135.4 | 135.4 | 135.2 | 135.3 |
| Intermediate materials less foods and energy | 133.1 | 136.5 | 134.6 | 135.1 | 135.5 | 136.1 | 136.6 | 136.7 | 137.0 | 137.2 | 137.0 | 137.0 | 137.0 | 136.7 | 136.8 |
| Crude energy materials | 78.5 | 120.3 | 87.9 | 92.0 | 100.2 | 102.5 | 97.9 | 106.5 | 130.6 | 127.6 | 122.4 | 136.7 | 140.5 | 134.8 | 154.7 |
| Crude materials less energy | 107.9 | 111.7 | 109.5 | 110.2 | 111.5 | 114.1 | 115.1 | 116.1 | 113.4 | 110.8 | 107.4 | 109.2 | 110.1 | 109.9 | 112.4 |
| Crude nonfood materials less energy | 135.2 | 145.2 | 146.0 | 149.8 | 151.3 | 150.9 | 149.2 | 148.8 | 146.7 | 144.3 | 141.9 | 142.9 | 141.2 | 137.7 | 137.5 |

## 32. Producer Price Indexes for the net output of major industry groups

[December 1984 = 100, unless otherwise indicated]

| SIC | Industry | Annual average | | 1999 | 2000 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | 1999 | 2000[P] | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
| – | **Total mining industries** | 78.0 | 112.2 | 86.7 | 89.5 | 95.8 | 98.9 | 95.7 | 100.6 | 118.4 | 118.1 | 113.8 | 122.6 | 128.7 | 124.6 | 139.6 |
| 10 | Metal mining | 70.3 | 73.5 | 72.6 | 73.9 | 75.3 | 73.3 | 71.8 | 72.6 | 73.7 | 73.9 | 73.4 | 73.6 | 74.7 | 72.5 | 73.5 |
| 12 | Coal mining (12/85 = 100) | 87.3 | 84.7 | 85.4 | 85.3 | 84.7 | 84.8 | 85.9 | 86.1 | 85.1 | 85.6 | 83.3 | 83.9 | 83.9 | 83.1 | 84.8 |
| 13 | Oil and gas extraction (12/85 = 100) | 78.5 | 125.0 | 90.4 | 94.2 | 102.6 | 107.0 | 102.7 | 109.1 | 133.1 | 132.8 | 127.4 | 139.3 | 147.3 | 142.3 | 162.0 |
| 14 | Mining and quarrying of nonmetallic minerals, except fuels | 134.0 | 137.1 | 134.4 | 135.0 | 135.3 | 135.7 | 136.7 | 137.2 | 137.2 | 137.6 | 137.8 | 138.0 | 138.1 | 138.1 | 138.2 |
| – | **Total manufacturing industries** | 128.3 | 133.5 | 130.5 | 130.8 | 132.2 | 132.9 | 132.6 | 133.1 | 134.2 | 133.9 | 133.5 | 134.6 | 134.8 | 134.9 | 134.4 |
| 20 | Food and kindred products | 126.3 | 128.5 | 126.7 | 126.7 | 127.2 | 127.4 | 128.1 | 129.3 | 129.4 | 129.4 | 128.7 | 128.4 | 128.6 | 128.8 | 129.6 |
| 21 | Tobacco manufactures | 325.7 | 345.8 | 345.0 | 329.4 | 348.6 | 347.3 | 341.8 | 341.7 | 342.2 | 342.3 | 350.4 | 350.5 | 351.6 | 351.6 | 351.8 |
| 22 | Textile mill products | 116.3 | 116.7 | 116.1 | 116.2 | 116.4 | 116.5 | 116.5 | 116.5 | 116.6 | 116.7 | 116.9 | 116.7 | 116.6 | 117.0 | 117.5 |
| 23 | Apparel and other finished products made from fabrics and similar materials | 125.3 | 125.7 | 125.3 | 125.2 | 125.2 | 125.6 | 125.7 | 125.6 | 125.6 | 125.9 | 125.9 | 125.6 | 125.9 | 125.9 | 125.9 |
| 24 | Lumber and wood products, except furniture | 161.8 | 158.1 | 160.6 | 161.4 | 161.6 | 162.1 | 161.7 | 159.1 | 158.7 | 157.6 | 155.7 | 155.4 | 155.3 | 154.3 | 154.2 |
| 25 | Furniture and fixtures | 141.3 | 143.3 | 142.1 | 142.4 | 142.5 | 143.0 | 143.2 | 143.4 | 143.5 | 143.5 | 143.6 | 143.5 | 143.6 | 143.8 | 143.8 |
| 26 | Paper and allied products | 136.4 | 145.8 | 140.4 | 141.0 | 141.5 | 143.2 | 145.4 | 146.9 | 147.3 | 147.3 | 147.3 | 147.6 | 147.6 | 147.3 | 147.0 |
| 27 | Printing, publishing, and allied industries | 177.6 | 182.8 | 179.2 | 180.4 | 180.8 | 181.1 | 182.0 | 182.0 | 183.1 | 183.2 | 183.6 | 183.2 | 184.0 | 184.8 | 185.1 |
| 28 | Chemicals and allied products | 149.7 | 156.8 | 152.9 | 153.6 | 154.5 | 155.2 | 155.5 | 156.4 | 156.5 | 157.4 | 157.5 | 158.4 | 159.3 | 158.5 | 159.0 |
| 29 | Petroleum refining and related products | 76.8 | 112.9 | 91.8 | 94.0 | 104.1 | 111.0 | 105.6 | 109.0 | 119.9 | 115.7 | 112.6 | 124.8 | 121.3 | 122.5 | 114.4 |
| 30 | Rubber and miscellaneous plastics products | 122.2 | 124.3 | 123.4 | 123.5 | 123.5 | 123.5 | 123.7 | 123.6 | 124.4 | 125.0 | 124.7 | 124.9 | 124.6 | 124.8 | 124.8 |
| 31 | Leather and leather products | 136.5 | 137.8 | 137.0 | 137.5 | 137.5 | 137.4 | 137.6 | 137.4 | 137.2 | 137.5 | 137.8 | 138.3 | 138.2 | 138.2 | 138.9 |
| 32 | Stone, clay, glass, and concrete products | 132.6 | 134.6 | 133.5 | 134.4 | 134.6 | 134.7 | 135.0 | 135.1 | 135.1 | 134.8 | 134.6 | 134.9 | 134.4 | 134.1 | 134.1 |
| 33 | Primary metal industries | 115.8 | 119.9 | 117.4 | 118.6 | 119.5 | 120.0 | 120.3 | 120.5 | 120.2 | 120.3 | 120.4 | 120.5 | 120.4 | 119.2 | 119.2 |
| 34 | Fabricated metal products, except machinery and transportation transportation equipment | 129.1 | 130.3 | 129.7 | 129.9 | 130.0 | 130.3 | 130.4 | 130.2 | 130.3 | 130.3 | 130.4 | 130.5 | 130.5 | 130.5 | 130.5 |
| 35 | Machinery, except electrical | 117.3 | 117.5 | 117.0 | 117.1 | 117.3 | 117.4 | 117.4 | 117.4 | 117.5 | 117.6 | 117.6 | 117.6 | 117.6 | 117.7 | 117.7 |
| 36 | Electrical and electronic machinery, equipment, and supplies | 109.5 | 108.3 | 108.9 | 108.7 | 108.6 | 108.6 | 108.6 | 108.4 | 108.5 | 108.5 | 108.1 | 108.0 | 108.1 | 107.8 | 107.7 |
| 37 | Transportation | 134.5 | 136.7 | 136.2 | 136.3 | 136.5 | 136.4 | 136.5 | 136.5 | 136.0 | 136.1 | 135.7 | 135.5 | 138.4 | 138.2 | 138.4 |
| 38 | Measuring and controlling instruments; photographic, medical, and optical goods; watches and clocks | 125.7 | 126.2 | 125.6 | 126.0 | 126.2 | 126.0 | 126.0 | 126.3 | 126.2 | 126.2 | 126.2 | 126.5 | 126.4 | 126.3 | 126.4 |
| 39 | Miscellaneous manufacturing industries (12/85 = 100) | 130.3 | 130.9 | 130.5 | 130.7 | 131.1 | 130.8 | 130.9 | 130.5 | 130.7 | 130.9 | 131.0 | 130.7 | 131.0 | 131.2 | 131.3 |
| | **Service industries:** | | | | | | | | | | | | | | | |
| 42 | Motor freight transportation and warehousing (06/93 = 100) | 114.8 | 119.3 | 115.8 | 116.5 | 117.0 | 118.1 | 118.2 | 118.6 | 119.0 | 118.9 | 120.1 | 120.6 | 121.4 | 121.6 | 121.5 |
| 43 | U.S. Postal Service (06/89 = 100) | 135.3 | 135.2 | 135.2 | 135.2 | 135.2 | 135.2 | 135.2 | 135.2 | 135.2 | 135.2 | 135.2 | 135.2 | 135.2 | 135.2 | 135.2 |
| 44 | Water transportation (12/92 = 100) | 113.0 | 123.0 | 116.1 | 116.4 | 117.0 | 117.8 | 118.6 | 123.8 | 124.1 | 125.2 | 126.1 | 126.6 | 126.5 | 127.8 | 126.1 |
| 45 | Transportation by air (12/92 = 100) | 130.8 | 147.6 | 134.2 | 141.0 | 141.6 | 144.3 | 145.4 | 146.0 | 147.2 | 147.6 | 147.9 | 151.3 | 151.2 | 153.1 | 154.2 |
| 46 | Pipelines, except natural gas (12/92 = 100) | 98.3 | 102.3 | 98.2 | 102.1 | 101.9 | 101.9 | 101.9 | 102.0 | 102.1 | 102.5 | 102.5 | 102.4 | 102.7 | 102.7 | 102.7 |

## 33. Annual data: Producer Price Indexes, by stage of processing

[1982 = 100]

| Index | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Finished goods** | | | | | | | | | | |
| Total | 121.7 | 123.2 | 124.7 | 125.5 | 127.9 | 131.3 | 131.8 | 130.7 | 133.0 | 138.0 |
| Foods | 124.1 | 123.3 | 125.7 | 126.8 | 129.0 | 133.6 | 134.5 | 134.3 | 135.1 | 137.1 |
| Energy | 78.1 | 77.8 | 78.0 | 77.0 | 78.1 | 83.2 | 83.4 | 75.1 | 78.8 | 94.2 |
| Other | 131.1 | 134.2 | 135.8 | 137.1 | 140.0 | 142.0 | 142.4 | 143.7 | 146.1 | 147.9 |
| **Intermediate materials, supplies, and components** | | | | | | | | | | |
| Total | 114.4 | 114.7 | 116.2 | 118.5 | 124.9 | 125.7 | 125.6 | 123.0 | 123.2 | 129.1 |
| Foods | 115.3 | 113.9 | 115.6 | 118.5 | 119.5 | 125.3 | 123.2 | 123.2 | 120.8 | 119.2 |
| Energy | 85.1 | 84.3 | 84.6 | 83.0 | 84.1 | 89.8 | 89.0 | 80.8 | 84.3 | 101.7 |
| Other | 121.4 | 122.0 | 123.8 | 127.1 | 135.2 | 134.0 | 134.2 | 133.5 | 133.1 | 136.5 |
| **Crude materials for further processing** | | | | | | | | | | |
| Total | 101.2 | 100.4 | 102.4 | 101.8 | 102.7 | 113.8 | 111.1 | 96.8 | 98.2 | 119.8 |
| Foods | 105.5 | 105.1 | 108.4 | 106.5 | 105.8 | 121.5 | 112.2 | 103.9 | 98.7 | 100.2 |
| Energy | 80.4 | 78.8 | 76.7 | 72.1 | 69.4 | 85.0 | 87.3 | 68.6 | 78.5 | 120.3 |
| Other | 97.5 | 94.2 | 94.1 | 97.0 | 105.8 | 105.7 | 103.5 | 84.5 | 91.1 | 118.2 |

## 34. U.S. export price indexes by Standard International Trade Classification

(1995 = 100, unless otherwise indicated)

| SITC Rev. 3 | Industry | 1999 | 2000 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
| 0 | **Food and live animals** | 85.6 | 86.3 | 86.9 | 86.8 | 87.5 | 88.3 | 87.4 | 85.8 | 83.6 | 85.9 | 87.1 | 88.4 | 88.7 |
| 01 | Meat and meat preparations | 100.9 | 100.1 | 98.0 | 99.4 | 102.2 | 105.1 | 109.3 | 108.2 | 103.7 | 105.2 | 107.4 | 107.6 | 105.9 |
| 04 | Cereals and cereal preparations | 68.5 | 71.0 | 74.1 | 74.4 | 74.0 | 75.0 | 71.6 | 66.9 | 64.0 | 67.8 | 70.8 | 74.0 | 75.7 |
| 05 | Vegetables, fruit, and nuts, prepared fresh or dry | 91.2 | 90.9 | 89.0 | 88.6 | 90.6 | 90.1 | 87.8 | 91.3 | 88.6 | 91.9 | 88.7 | 89.8 | 89.3 |
| 2 | **Crude materials, inedible, except fuels** | 78.9 | 80.0 | 82.2 | 83.2 | 84.2 | 85.2 | 84.4 | 82.9 | 82.9 | 83.7 | 83.4 | 82.2 | 82.5 |
| 21 | Hides, skins, and furskins, raw | 90.5 | 91.1 | 89.5 | 87.7 | 85.5 | 86.5 | 86.7 | 89.7 | 95.4 | 100.5 | 104.7 | 102.1 | 103.1 |
| 22 | Oilseeds and oleaginous fruits | 79.6 | 80.5 | 84.8 | 86.0 | 88.3 | 89.1 | 86.3 | 80.3 | 78.0 | 83.8 | 81.3 | 79.3 | 84.3 |
| 24 | Cork and wood | 85.0 | 86.4 | 86.5 | 87.2 | 87.4 | 86.7 | 86.7 | 86.5 | 88.4 | 86.9 | 87.2 | 86.5 | 85.9 |
| 25 | Pulp and waste paper | 80.9 | 84.3 | 88.3 | 90.0 | 93.8 | 99.0 | 97.6 | 95.9 | 91.7 | 90.7 | 89.8 | 88.6 | 86.5 |
| 26 | Textile fibers and their waste | 62.5 | 61.2 | 65.7 | 68.6 | 68.9 | 69.0 | 69.6 | 67.7 | 70.7 | 72.2 | 72.0 | 72.2 | 73.0 |
| 27 | Crude fertilizers and crude minerals | 94.1 | 94.3 | 94.0 | 93.5 | 93.0 | 93.0 | 93.3 | 93.3 | 93.1 | 91.5 | 90.7 | 90.6 | 90.6 |
| 28 | Metalliferous ores and metal scrap | 78.4 | 80.0 | 80.7 | 80.9 | 80.4 | 79.6 | 78.2 | 78.0 | 78.7 | 78.7 | 79.5 | 76.2 | 74.7 |
| 3 | **Mineral fuels, lubricants, and related products** | 126.6 | 129.5 | 138.5 | 152.1 | 137.2 | 142.3 | 144.9 | 151.2 | 147.6 | 166.3 | 157.2 | 162.1 | 157.5 |
| 32 | Coal, coke, and briquettes | 97.5 | 96.1 | 96.1 | 96.1 | 94.7 | 94.5 | 93.8 | 93.8 | 93.1 | 93.1 | 93.3 | 93.1 | 93.0 |
| 33 | Petroleum, petroleum products, and related materials | 140.1 | 143.6 | 159.6 | 179.2 | 152.0 | 163.0 | 168.2 | 178.3 | 172.3 | 203.3 | 189.0 | 193.4 | 183.7 |
| 4 | **Animal and vegetable oils, fats, and waxes** | 78.0 | 75.8 | 74.3 | 70.8 | 71.6 | 70.1 | 67.1 | 64.6 | 63.2 | 61.7 | 60.0 | 59.0 | 58.7 |
| 5 | **Chemicals and related products, n.e.s.** | 93.6 | 93.8 | 94.2 | 94.4 | 95.8 | 95.8 | 95.5 | 94.7 | 94.9 | 94.4 | 94.9 | 94.1 | 93.6 |
| 54 | Medicinal and pharmaceutical products | 100.3 | 100.2 | 100.4 | 100.2 | 99.9 | 100.0 | 99.7 | 100.5 | 100.3 | 100.2 | 100.4 | 100.2 | 100.1 |
| 55 | Essential oils; polishing and cleaning preparations | 103.4 | 103.4 | 103.3 | 103.0 | 103.2 | 103.1 | 102.8 | 103.3 | 103.3 | 103.4 | 103.4 | 103.3 | 103.2 |
| 57 | Plastics in primary forms (12/92 = 100) | 95.0 | 94.8 | 94.8 | 95.5 | 97.7 | 98.4 | 98.1 | 97.0 | 95.4 | 92.8 | 92.3 | 91.2 | 90.6 |
| 58 | Plastics in nonprimary forms (12/92 = 100) | 98.0 | 97.8 | 98.6 | 100.1 | 100.2 | 99.8 | 99.3 | 99.4 | 99.4 | 99.3 | 98.9 | 98.3 | 97.8 |
| 59 | Chemical materials and products, n.e.s. | 99.1 | 99.2 | 99.9 | 99.6 | 99.4 | 99.3 | 99.1 | 99.3 | 99.2 | 99.2 | 99.1 | 99.0 | 99.7 |
| 6 | **Manufactured goods classified chiefly by materials** | 98.3 | 98.3 | 99.0 | 99.7 | 99.9 | 100.1 | 100.3 | 100.7 | 100.9 | 101.1 | 100.8 | 100.6 | 100.4 |
| 62 | Rubber manufactures, n.e.s. | 108.5 | 104.7 | 103.7 | 103.6 | 103.7 | 104.6 | 104.4 | 104.8 | 104.7 | 104.7 | 104.6 | 104.1 | 103.8 |
| 64 | Paper, paperboard, and articles of paper, pulp, and paperboard | 87.2 | 87.6 | 87.8 | 88.4 | 89.1 | 90.5 | 89.8 | 90.4 | 90.3 | 90.0 | 90.0 | 89.6 | 89.1 |
| 66 | Nonmetallic mineral manufactures, n.e.s. | 105.8 | 105.8 | 106.0 | 106.2 | 106.4 | 106.4 | 106.5 | 106.3 | 106.3 | 106.1 | 105.8 | 106.0 | 105.5 |
| 68 | Nonferrous metals | 92.3 | 93.4 | 98.8 | 101.9 | 100.3 | 98.1 | 100.1 | 103.0 | 105.1 | 105.0 | 104.9 | 104.2 | 105.9 |
| 7 | **Machinery and transport equipment** | 97.2 | 97.4 | 97.3 | 97.3 | 97.3 | 97.4 | 97.3 | 97.3 | 97.3 | 97.4 | 97.3 | 97.4 | 97.5 |
| 71 | Power generating machinery and equipment | 111.0 | 111.8 | 111.8 | 111.8 | 111.9 | 112.0 | 112.0 | 112.4 | 112.3 | 112.4 | 112.4 | 113.7 | 113.7 |
| 72 | Machinery specialized for particular industries | 104.7 | 106.2 | 106.3 | 106.1 | 106.2 | 106.2 | 106.5 | 106.4 | 106.5 | 106.3 | 106.2 | 106.5 | 106.9 |
| 74 | General industrial machines and parts, n.e.s., and machine parts | 107.9 | 107.5 | 107.6 | 108.0 | 108.2 | 108.2 | 108.2 | 108.3 | 108.1 | 108.2 | 108.3 | 108.4 | 108.4 |
| 75 | Computer equipment and office machines | 70.2 | 70.1 | 68.7 | 68.7 | 68.5 | 68.5 | 68.2 | 68.3 | 67.8 | 67.8 | 67.8 | 67.8 | 67.7 |
| 76 | Telecommunications and sound recording and reproducing apparatus and equipment | 96.7 | 96.4 | 97.0 | 96.6 | 96.4 | 97.0 | 96.9 | 96.7 | 96.8 | 96.8 | 96.6 | 96.5 | 96.5 |
| 77 | Electrical machinery and equipment | 86.7 | 86.4 | 86.6 | 86.3 | 86.4 | 86.3 | 85.7 | 85.7 | 85.8 | 85.8 | 85.4 | 85.3 | 85.4 |
| 78 | Road vehicles | 103.1 | 103.5 | 103.6 | 104.0 | 103.9 | 103.9 | 103.9 | 103.9 | 103.9 | 104.1 | 104.0 | 103.9 | 104.0 |
| 87 | **Professional, scientific, and controlling instruments and apparatus** | 105.3 | 105.2 | 105.4 | 105.7 | 105.7 | 105.7 | 105.8 | 106.4 | 106.4 | 106.5 | 106.9 | 106.9 | 106.5 |

## 35. U.S. import price indexes by Standard International Trade Classification

[1995 = 100, unless otherwise indicated]

| SITC Rev. 3 | Industry | 1999 | 2000 | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
| 0 | **Food and live animals** | 94.7 | 93.7 | 93.6 | 93.1 | 94.0 | 92.3 | 91.3 | 91.5 | 91.7 | 91.2 | 91.4 | 90.2 | 92.3 |
| 01 | Meat and meat preparations | 98.4 | 97.8 | 98.2 | 99.1 | 100.2 | 100.2 | 99.1 | 98.1 | 98.9 | 99.0 | 95.5 | 95.7 | 97.3 |
| 03 | Fish and crustaceans, mollusks, and other aquatic invertebrates | 106.8 | 106.8 | 107.9 | 108.0 | 111.0 | 109.6 | 109.1 | 110.7 | 113.5 | 112.6 | 110.7 | 109.3 | 109.0 |
| 05 | Vegetables, fruit, and nuts, prepared fresh or dry | 103.6 | 102.0 | 102.1 | 101.2 | 100.7 | 96.8 | 95.7 | 97.2 | 97.6 | 97.8 | 100.9 | 96.8 | 104.1 |
| 07 | Coffee, tea, cocoa, spices, and manufactures thereof | 70.6 | 67.2 | 64.7 | 61.0 | 61.1 | 59.8 | 59.5 | 56.8 | 55.8 | 54.5 | 54.0 | 51.9 | 50.9 |
| 1 | **Beverages and tobacco** | 112.0 | 111.2 | 111.4 | 111.7 | 111.9 | 112.4 | 113.0 | 112.5 | 112.9 | 113.6 | 113.6 | 113.4 | 113.0 |
| 11 | Beverages | 108.7 | 107.9 | 108.2 | 108.5 | 108.7 | 109.4 | 110.1 | 109.4 | 109.9 | 110.7 | 110.6 | 110.7 | 110.3 |
| 2 | **Crude materials, inedible, except fuels** | 92.2 | 93.6 | 94.7 | 94.3 | 93.8 | 91.9 | 90.7 | 90.7 | 89.6 | 88.9 | 89.8 | 87.7 | 88.5 |
| 24 | Cork and wood | 118.7 | 117.7 | 117.0 | 118.6 | 117.6 | 112.9 | 110.1 | 107.0 | 102.2 | 99.7 | 101.6 | 97.7 | 101.9 |
| 25 | Pulp and waste paper | 68.2 | 70.5 | 72.0 | 72.4 | 75.1 | 77.0 | 80.1 | 80.7 | 81.4 | 82.0 | 83.4 | 83.4 | 83.4 |
| 28 | Metalliferous ores and metal scrap | 99.0 | 101.4 | 105.7 | 104.0 | 101.7 | 99.6 | 100.7 | 101.2 | 102.1 | 101.6 | 102.2 | 100.1 | 99.0 |
| 29 | Crude animal and vegetable materials, n.e.s. | 111.9 | 121.1 | 124.3 | 111.9 | 110.1 | 106.7 | 92.7 | 101.8 | 101.3 | 103.0 | 104.3 | 99.1 | 96.5 |
| 3 | **Mineral fuels, lubricants, and related products** | 141.2 | 145.2 | 165.7 | 165.4 | 148.5 | 154.3 | 172.0 | 170.6 | 172.1 | 189.0 | 186.1 | 190.0 | 183.1 |
| 33 | Petroleum, petroleum products, and related materials | 141.4 | 146.1 | 167.9 | 166.6 | 147.1 | 154.2 | 171.0 | 168.5 | 169.9 | 187.6 | 181.5 | 184.6 | 166.9 |
| 34 | Gas, natural and manufactured | 150.2 | 147.8 | 161.4 | 170.5 | 171.5 | 167.5 | 195.4 | 202.9 | 205.4 | 218.1 | 241.8 | 253.2 | 334.9 |
| 5 | **Chemicals and related products, n.e.s.** | 92.0 | 92.2 | 92.7 | 92.8 | 93.4 | 94.3 | 94.1 | 95.5 | 95.9 | 95.4 | 95.2 | 94.7 | 95.0 |
| 52 | Inorganic chemicals | 88.0 | 88.3 | 89.0 | 88.8 | 89.8 | 90.7 | 91.5 | 92.5 | 92.6 | 92.5 | 93.1 | 93.1 | 94.2 |
| 53 | Dying, tanning, and coloring materials | 89.7 | 88.9 | 89.3 | 88.4 | 88.0 | 87.4 | 86.1 | 87.6 | 88.6 | 87.9 | 87.0 | 86.9 | 86.9 |
| 54 | Medicinal and pharmaceutical products | 97.3 | 98.2 | 98.2 | 97.3 | 97.3 | 97.3 | 96.8 | 97.5 | 97.3 | 96.7 | 96.0 | 95.7 | 95.7 |
| 55 | Essential oils; polishing and cleaning preparations | 90.2 | 89.6 | 89.6 | 89.7 | 89.4 | 89.9 | 89.6 | 89.9 | 89.4 | 88.8 | 87.6 | 87.3 | 87.3 |
| 57 | Plastics in primary forms (12/92 = 100) | 94.0 | 93.7 | 93.0 | 93.9 | 93.9 | 94.0 | 94.3 | 95.5 | 95.4 | 95.3 | 96.0 | 95.9 | 95.8 |
| 58 | Plastics in nonprimary forms (12/92 = 100) | 79.7 | 79.3 | 79.0 | 80.4 | 80.3 | 80.8 | 80.8 | 81.5 | 80.9 | 80.8 | 80.0 | 79.5 | 78.9 |
| 59 | Chemical materials and products, n.e.s. | 99.5 | 100.0 | 101.6 | 100.6 | 100.0 | 100.9 | 99.7 | 100.2 | 100.0 | 101.1 | 101.0 | 100.9 | 100.8 |
| 6 | **Manufactured goods classified chiefly by materials** | 93.9 | 94.5 | 95.5 | 98.0 | 97.5 | 97.1 | 97.6 | 98.0 | 98.8 | 97.9 | 97.6 | 97.3 | 97.5 |
| 62 | Rubber manufactures, n.e.s. | 94.4 | 92.7 | 92.8 | 92.3 | 92.4 | 92.5 | 91.8 | 92.1 | 91.9 | 91.7 | 91.7 | 91.6 | 91.6 |
| 64 | Paper, paperboard, and articles of paper, pulp, and paperboard | 86.2 | 86.6 | 86.9 | 87.1 | 88.8 | 89.6 | 89.1 | 89.5 | 89.4 | 91.4 | 91.6 | 91.9 | 92.3 |
| 66 | Nonmetallic mineral manufactures, n.e.s. | 101.2 | 100.8 | 101.2 | 100.8 | 100.9 | 100.7 | 100.5 | 100.9 | 100.9 | 100.8 | 100.2 | 100.2 | 100.2 |
| 68 | Nonferrous metals | 95.6 | 98.9 | 104.4 | 115.1 | 110.3 | 106.9 | 110.7 | 112.5 | 118.7 | 114.4 | 115.7 | 114.3 | 114.7 |
| 69 | Manufactures of metals, n.e.s. | 95.9 | 95.7 | 96.1 | 96.1 | 95.9 | 95.9 | 95.7 | 95.8 | 95.4 | 95.4 | 95.2 | 94.9 | 94.9 |
| 7 | **Machinery and transport equipment** | 89.7 | 89.8 | 89.8 | 89.6 | 89.7 | 89.8 | 89.6 | 89.6 | 89.5 | 89.3 | 89.2 | 89.1 | 89.0 |
| 72 | Machinery specialized for particular industries | 97.8 | 97.7 | 97.9 | 97.3 | 97.1 | 97.0 | 96.1 | 96.7 | 96.6 | 95.9 | 95.7 | 95.3 | 95.3 |
| 74 | General industrial machines and parts, n.e.s., and machine parts | 97.0 | 97.0 | 96.7 | 97.0 | 96.9 | 96.7 | 96.2 | 96.7 | 96.4 | 96.1 | 95.5 | 95.3 | 95.4 |
| 75 | Computer equipment and office machines | 61.7 | 61.5 | 61.4 | 61.0 | 60.5 | 60.2 | 60.0 | 59.9 | 59.9 | 59.8 | 58.8 | 58.8 | 58.7 |
| 76 | Telecommunications and sound recording and reproducing apparatus and equipment | 85.6 | 85.2 | 85.2 | 84.9 | 84.5 | 84.7 | 84.6 | 84.3 | 84.2 | 84.1 | 83.8 | 83.8 | 83.8 |
| 77 | Electrical machinery and equipment | 82.1 | 82.4 | 82.2 | 82.2 | 83.0 | 83.5 | 83.3 | 82.8 | 82.7 | 82.6 | 82.7 | 82.5 | 82.1 |
| 78 | Road vehicles | 102.3 | 102.4 | 102.6 | 102.6 | 102.7 | 102.7 | 102.8 | 102.8 | 102.7 | 102.6 | 102.9 | 102.9 | 102.8 |
| 85 | Footwear | 100.8 | 100.8 | 100.9 | 100.7 | 100.5 | 100.7 | 100.3 | 100.9 | 101.0 | 100.9 | 100.8 | 100.7 | 100.7 |
| 88 | Photographic apparatus, equipment, and supplies, and optical goods, n.e.s. | 92.5 | 92.2 | 91.7 | 91.8 | 91.8 | 91.9 | 91.6 | 92.5 | 92.1 | 91.4 | 91.4 | 91.1 | 90.6 |

## 36. U.S. export price indexes by end-use category

[1995 = 100]

| Category | 1999 | 2000 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
| ALL COMMODITIES | 95.2 | 95.4 | 95.8 | 96.3 | 96.2 | 96.4 | 96.3 | 96.2 | 96.0 | 96.6 | 96.5 | 96.5 | 96.4 |
| Foods, feeds, and beverages | 86.0 | 86.3 | 87.2 | 87.1 | 87.8 | 88.3 | 87.1 | 85.1 | 82.8 | 85.3 | 85.8 | 86.7 | 87.4 |
| Agricultural foods, feeds, and beverages | 84.9 | 85.4 | 86.0 | 86.2 | 87.1 | 87.7 | 86.2 | 84.0 | 81.3 | 84.3 | 84.6 | 85.7 | 86.7 |
| Nonagricultural (fish, beverages) food products | 99.5 | 98.3 | 100.9 | 97.8 | 97.0 | 96.6 | 98.1 | 97.9 | 99.7 | 97.9 | 99.5 | 98.2 | 95.7 |
| Industrial supplies and materials | 91.7 | 92.1 | 93.6 | 95.2 | 94.6 | 95.2 | 95.2 | 95.5 | 95.4 | 96.6 | 96.1 | 95.9 | 95.2 |
| Agricultural industrial supplies and materials | 76.7 | 75.2 | 76.9 | 77.7 | 78.2 | 78.2 | 78.2 | 77.9 | 80.3 | 81.9 | 82.3 | 82.0 | 82.7 |
| Fuels and lubricants | 120.4 | 122.7 | 131.3 | 143.6 | 127.8 | 132.9 | 135.6 | 141.1 | 137.9 | 155.0 | 146.9 | 150.7 | 146.3 |
| Nonagricultural supplies and materials, excluding fuel and building materials | 89.3 | 89.7 | 90.4 | 91.0 | 91.9 | 92.1 | 91.9 | 91.7 | 91.7 | 91.4 | 91.5 | 90.9 | 90.4 |
| Selected building materials | 88.6 | 89.2 | 89.5 | 90.1 | 90.4 | 90.0 | 89.9 | 89.6 | 90.5 | 89.4 | 89.7 | 89.0 | 89.0 |
| Capital goods | 96.0 | 96.1 | 96.0 | 96.0 | 96.1 | 96.1 | 96.1 | 96.1 | 96.1 | 96.2 | 96.1 | 96.2 | 96.3 |
| Electric and electrical generating equipment | 98.5 | 98.3 | 98.8 | 98.8 | 98.7 | 98.9 | 99.2 | 99.1 | 99.7 | 99.9 | 99.5 | 99.6 | 99.8 |
| Nonelectrical machinery | 92.1 | 92.1 | 91.9 | 91.8 | 91.9 | 91.9 | 91.7 | 91.6 | 91.6 | 91.5 | 91.5 | 91.5 | 91.5 |
| Automotive vehicles, parts, and engines | 103.8 | 103.9 | 103.8 | 104.2 | 104.2 | 104.2 | 104.1 | 104.4 | 104.4 | 104.5 | 104.5 | 104.4 | 104.4 |
| Consumer goods, excluding automotive | 102.4 | 102.4 | 102.5 | 102.3 | 102.4 | 102.4 | 102.3 | 102.5 | 102.4 | 102.2 | 102.2 | 102.2 | 102.0 |
| Nondurables, manufactured | 102.9 | 102.8 | 102.6 | 102.4 | 102.3 | 102.4 | 102.1 | 102.4 | 102.4 | 102.2 | 102.4 | 102.2 | 101.9 |
| Durables, manufactured | 100.8 | 101.0 | 101.4 | 101.0 | 101.3 | 101.3 | 101.3 | 101.5 | 101.4 | 101.3 | 101.2 | 101.2 | 101.3 |
| Agricultural commodities | 83.1 | 83.2 | 84.0 | 84.4 | 85.1 | 85.6 | 84.4 | 82.6 | 80.9 | 83.5 | 83.9 | 84.7 | 85.7 |
| Nonagricultural commodities | 96.6 | 96.8 | 97.2 | 97.6 | 97.4 | 97.7 | 97.6 | 97.8 | 97.7 | 98.0 | 97.9 | 97.8 | 97.6 |

## 37. U.S. import price indexes by end-use category

[1995 = 100]

| Category | 1999 | 2000 | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Dec. | Jan. | Feb. | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Nov. | Dec. |
| ALL COMMODITIES | 96.8 | 97.2 | 99.2 | 99.3 | 97.9 | 98.3 | 99.6 | 99.7 | 99.9 | 101.0 | 100.6 | 100.7 | 100.2 |
| Foods, feeds, and beverages | 94.8 | 93.6 | 93.3 | 92.5 | 93.3 | 91.9 | 91.1 | 91.1 | 91.3 | 90.7 | 90.6 | 89.4 | 90.8 |
| Agricultural foods, feeds, and beverages | 89.8 | 88.4 | 87.6 | 86.6 | 86.7 | 85.2 | 84.1 | 83.7 | 83.2 | 82.5 | 82.8 | 81.8 | 83.9 |
| Nonagricultural (fish, beverages) food products | 107.7 | 107.2 | 108.1 | 108.3 | 110.8 | 109.8 | 109.7 | 110.5 | 112.9 | 112.5 | 111.2 | 109.5 | 109.1 |
| Industrial supplies and materials | 109.4 | 111.0 | 118.6 | 119.8 | 114.3 | 115.9 | 121.8 | 121.8 | 122.8 | 127.6 | 126.5 | 127.4 | 125.4 |
| Fuels and lubricants | 140.7 | 144.2 | 164.7 | 163.7 | 147.7 | 153.3 | 170.6 | 169.2 | 170.9 | 187.4 | 184.2 | 188.2 | 181.1 |
| Petroleum and petroleum products | 140.9 | 145.8 | 167.5 | 166.2 | 147.4 | 154.0 | 170.4 | 168.0 | 169.5 | 187.1 | 181.7 | 184.6 | 167.4 |
| Paper and paper base stocks | 81.2 | 82.1 | 82.8 | 83.1 | 85.6 | 86.8 | 87.0 | 87.5 | 87.6 | 89.8 | 90.4 | 90.6 | 91.0 |
| Materials associated with nondurable supplies and materials | 89.1 | 89.2 | 89.7 | 90.4 | 91.2 | 92.1 | 91.7 | 92.7 | 93.4 | 92.8 | 92.9 | 92.7 | 93.4 |
| Selected building materials | 111.1 | 110.5 | 110.1 | 112.1 | 111.9 | 109.1 | 105.0 | 103.4 | 100.2 | 98.7 | 99.3 | 97.2 | 99.3 |
| Unfinished metals associated with durable goods | 94.8 | 97.4 | 100.3 | 107.1 | 104.3 | 102.0 | 105.0 | 106.5 | 109.5 | 105.9 | 105.5 | 104.1 | 104.1 |
| Nonmetals associated with durable goods | 87.4 | 87.2 | 88.0 | 87.6 | 87.8 | 87.8 | 87.0 | 87.7 | 87.6 | 87.2 | 87.2 | 87.0 | 86.9 |
| Capital goods | 81.7 | 81.7 | 81.6 | 81.3 | 81.4 | 81.2 | 80.9 | 80.9 | 80.7 | 80.6 | 80.2 | 80.1 | 80.0 |
| Electric and electrical generating equipment | 91.1 | 91.8 | 91.8 | 92.1 | 93.9 | 94.2 | 94.3 | 94.1 | 93.7 | 93.5 | 93.4 | 93.1 | 93.1 |
| Nonelectrical machinery | 78.4 | 78.3 | 78.2 | 77.9 | 77.7 | 77.5 | 77.1 | 77.1 | 77.0 | 76.8 | 76.4 | 76.3 | 76.1 |
| Automotive vehicles, parts, and engines | 102.0 | 102.1 | 102.2 | 102.2 | 102.3 | 102.6 | 102.7 | 102.8 | 102.7 | 102.5 | 102.7 | 102.7 | 102.7 |
| Consumer goods, excluding automotive | 97.5 | 97.5 | 97.4 | 97.1 | 97.1 | 97.0 | 96.5 | 96.8 | 96.8 | 96.6 | 96.6 | 96.6 | 96.4 |
| Nondurables, manufactured | 100.6 | 100.4 | 100.4 | 100.3 | 100.3 | 100.1 | 99.5 | 99.8 | 100.0 | 99.8 | 99.8 | 99.9 | 99.7 |
| Durables, manufactured | 94.1 | 94.1 | 93.8 | 93.5 | 93.4 | 93.4 | 93.2 | 93.4 | 93.2 | 93.0 | 92.8 | 92.8 | 92.8 |
| Nonmanufactured consumer goods | 99.8 | 101.5 | 102.0 | 100.1 | 100.3 | 99.7 | 98.0 | 99.5 | 99.2 | 99.6 | 99.8 | 99.1 | 98.7 |

## 38. U.S. international price indexes for selected categories of services

[1990 = 100, unless otherwise indicated]

| Category | 1999 | | | | 2000 | | | |
|---|---|---|---|---|---|---|---|---|
| | Mar. | June | Sept. | Dec. | Mar. | June | Sept. | Dec. |
| Air freight (inbound) (9/90 = 100) | 88.0 | 86.2 | 87.9 | 90.7 | 88.9 | 88.4 | 88.5 | 87.4 |
| Air freight (outbound) (9/92 = 100) | 92.7 | 92.8 | 92.7 | 91.7 | 91.7 | 92.8 | 92.6 | 92.6 |
| Air passenger fares (U.S. carriers) | 104.5 | 112.3 | 114.2 | 106.8 | 107.3 | 113.3 | 115.5 | 111.9 |
| Air passenger fares (foreign carriers) | 98.9 | 106.3 | 108.6 | 102.2 | 102.6 | 107.9 | 109.1 | 103.2 |
| Ocean liner freight (inbound) | 102.6 | 133.7 | 148.0 | 139.4 | 136.3 | 143.0 | 142.8 | 142.8 |

## 39. Indexes of productivity, hourly compensation, and unit costs, quarterly data seasonally adjusted

[1992 = 100]

| Item | Quarterly indexes | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1998 | | | | | | 1999 | | | | 2000 | | |
| | III | IV | I | II | III | IV | I | II | III | IV | I | II | III |
| **Business** | | | | | | | | | | | | | |
| Output per hour of all persons | 108.3 | 108.5 | 109.7 | 110.0 | 110.6 | 111.6 | 112.6 | 112.8 | 114.2 | 116.3 | 116.7 | 118.7 | 119.5 |
| Compensation per hour | 113.5 | 115.3 | 117.1 | 118.5 | 120.0 | 121.4 | 123.0 | 124.5 | 126.1 | 127.3 | 128.4 | 130.6 | 132.4 |
| Real compensation per hour | 100.4 | 101.5 | 102.9 | 103.8 | 104.7 | 105.5 | 106.4 | 106.9 | 107.6 | 107.8 | 107.7 | 108.5 | 109.2 |
| Unit labor costs | 104.8 | 106.3 | 106.7 | 107.7 | 108.5 | 108.8 | 109.3 | 110.4 | 110.5 | 109.5 | 110.0 | 110.0 | 110.8 |
| Unit nonlabor payments | 118.5 | 116.8 | 116.4 | 115.1 | 114.6 | 114.6 | 115.1 | 114.1 | 114.3 | 116.8 | 118.2 | 120.0 | 119.9 |
| Implicit price deflator | 109.9 | 110.2 | 110.3 | 110.5 | 110.7 | 110.9 | 111.4 | 111.8 | 111.9 | 112.2 | 113.0 | 113.7 | 114.1 |
| **Nonfarm business** | | | | | | | | | | | | | |
| Output per hour of all persons | 108.0 | 108.1 | 109.3 | 109.8 | 110.3 | 111.2 | 112.0 | 112.1 | 113.6 | 115.8 | 116.3 | 118.1 | 119.1 |
| Compensation per hour | 113.0 | 114.7 | 116.4 | 117.9 | 119.4 | 120.8 | 122.1 | 123.6 | 125.2 | 126.5 | 127.8 | 129.6 | 131.6 |
| Real compensation per hour | 100.0 | 101.0 | 102.3 | 103.2 | 104.2 | 104.9 | 105.7 | 106.1 | 106.8 | 107.2 | 107.1 | 107.7 | 108.5 |
| Unit labor costs | 104.7 | 106.1 | 106.5 | 107.5 | 108.3 | 108.5 | 109.0 | 110.2 | 110.3 | 109.3 | 109.8 | 109.7 | 110.5 |
| Unit nonlabor payments | 119.5 | 117.8 | 117.4 | 116.3 | 115.8 | 115.8 | 116.7 | 115.7 | 116.1 | 118.6 | 120.1 | 121.8 | 121.9 |
| Implicit price deflator | 110.1 | 110.4 | 110.5 | 110.7 | 111.0 | 111.2 | 111.8 | 112.2 | 112.4 | 112.7 | 113.6 | 114.1 | 114.7 |
| **Nonfinancial corporations** | | | | | | | | | | | | | |
| Output per hour of all employees | 110.8 | 111.6 | 112.3 | 113.4 | 114.9 | 115.8 | 117.1 | 118.2 | 119.7 | 121.5 | 121.3 | 122.9 | 124.4 |
| Compensation per hour | 112.1 | 113.7 | 115.2 | 116.6 | 118.0 | 119.3 | 120.9 | 122.4 | 124.0 | 125.3 | 126.1 | 128.0 | 129.9 |
| Real compensation per hour | 99.2 | 100.1 | 101.2 | 102.1 | 103.0 | 103.7 | 104.6 | 105.1 | 105.8 | 106.1 | 105.8 | 106.4 | 107.1 |
| Total unit costs | 101.1 | 101.5 | 102.0 | 102.3 | 102.1 | 102.6 | 102.5 | 103.0 | 103.2 | 103.0 | 104.0 | 104.3 | 104.7 |
| Unit labor costs | 101.2 | 101.9 | 102.6 | 102.8 | 102.7 | 103.0 | 103.2 | 103.5 | 103.6 | 103.1 | 1-4/- | 104.2 | 104.4 |
| Unit nonlabor costs | 100.8 | 100.4 | 100.5 | 100.9 | 100.2 | 101.6 | 100.7 | 101.4 | 102.1 | 102.5 | 104.2 | 104.9 | 105.5 |
| Unit profits | 160.3 | 156.5 | 150.4 | 147.2 | 151.4 | 144.5 | 149.7 | 147.5 | 143.3 | 145.7 | 152.2 | 156.3 | 154.1 |
| Unit nonlabor payments | 116.0 | 114.7 | 113.2 | 112.7 | 113.3 | 112.5 | 113.2 | 113.2 | 112.6 | 113.5 | 116.4 | 118.0 | 117.9 |
| Implicit price deflator | 106.1 | 106.1 | 106.1 | 106.1 | 106.2 | 106.2 | 106.5 | 106.7 | 106.6 | 106.6 | 108.1 | 108.8 | 108.9 |
| **Manufacturing** | | | | | | | | | | | | | |
| Output per hour of all persons | 118.7 | 120.1 | 121.3 | 122.7 | 125.1 | 126.8 | 128.9 | 130.4 | 131.9 | 135.1 | 138.4 | 140.3 | 142.8 |
| Compensation per hour | 111.5 | 113.3 | 115.2 | 116.6 | 118.1 | 119.4 | 120.7 | 122.4 | 124.1 | 125.5 | 127.0 | 128.2 | 130.3 |
| Real compensation per hour | 98.6 | 99.8 | 101.2 | 102.1 | 103.0 | 103.7 | 104.4 | 105.1 | 105.9 | 106.4 | 106.5 | 106.6 | 107.5 |
| Unit labor costs | 93.9 | 94.4 | 95.0 | 95.1 | 94.4 | 94.1 | 93.6 | 93.8 | 94.1 | 92.9 | 91.8 | 91.4 | 91.2 |

## 40. Annual indexes of multifactor productivity and related measures, selected years

[1996 = 100, unless otherwise indicated]

| Item | 1960 | 1970 | 1980 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Private business** | | | | | | | | | | | | |
| Productivity: | | | | | | | | | | | | |
| Output per hour of all persons | 45.6 | 63.0 | 75.8 | 90.2 | 91.3 | 94.8 | 95.4 | 96.6 | 97.3 | 100.0 | 102.0 | 104.8 |
| Output per unit of capital services | 110.4 | 111.1 | 101.5 | 99.3 | 96.1 | 97.7 | 98.5 | 100.3 | 99.7 | 100.0 | 100.5 | 100.1 |
| Multifactor productivity | 65.2 | 80.0 | 88.3 | 95.3 | 94.4 | 96.6 | 97.1 | 98.1 | 98.4 | 100.0 | 101.1 | 102.6 |
| Output | 27.5 | 42.0 | 59.4 | 83.6 | 82.6 | 85.7 | 88.5 | 92.8 | 95.8 | 100.0 | 105.2 | 110.6 |
| Inputs: | | | | | | | | | | | | |
| Labor input | 54.0 | 61.0 | 71.9 | 89.4 | 88.3 | 89.3 | 91.8 | 95.6 | 98.0 | 100.0 | 103.7 | 106.4 |
| Capital services | 24.9 | 37.8 | 58.6 | 84.2 | 86.0 | 87.7 | 89.8 | 92.6 | 96.0 | 100.0 | 104.7 | 110.4 |
| Combined units of labor and capital input | 42.3 | 52.4 | 67.3 | 87.7 | 87.5 | 88.8 | 91.1 | 94.6 | 97.3 | 100.0 | 104.0 | 107.7 |
| Capital per hour of all persons | 41.3 | 56.7 | 74.7 | 90.8 | 95.0 | 97.0 | 96.8 | 96.3 | 97.6 | 100.0 | 101.5 | 104.7 |
| **Private nonfarm business** | | | | | | | | | | | | |
| Productivity: | | | | | | | | | | | | |
| Output per hour of all persons | 48.7 | 64.9 | 77.3 | 90.3 | 91.4 | 94.8 | 95.3 | 96.5 | 97.5 | 100.0 | 101.7 | 104.5 |
| Output per unit of capital services | 120.1 | 118.3 | 105.7 | 100.0 | 96.6 | 97.9 | 98.8 | 100.3 | 99.9 | 100.0 | 100.2 | 99.8 |
| Multifactor productivity | 69.1 | 82.6 | 90.5 | 95.6 | 94.7 | 96.6 | 97.1 | 98.1 | 98.6 | 100.0 | 100.9 | 102.4 |
| Output | 27.2 | 41.9 | 59.6 | 83.5 | 82.5 | 85.5 | 88.4 | 92.6 | 95.8 | 100.0 | 105.1 | 110.6 |
| Inputs: | | | | | | | | | | | | |
| Labor input | 50.1 | 59.3 | 70.7 | 89.2 | 88.0 | 89.0 | 91.8 | 95.4 | 97.8 | 100.0 | 103.8 | 106.6 |
| Capital services | 22.6 | 35.5 | 56.4 | 83.5 | 85.4 | 87 3 | 89.5 | 92.3 | 95.9 | 100.0 | 104.9 | 110.8 |
| Combined units of labor and capital input | 39.3 | 50.7 | 65.9 | 87.3 | 87.1 | 88.4 | 91.0 | 94.4 | 97.2 | 100.0 | 104.2 | 108.0 |
| Capital per hour of all persons | 40.5 | 54.8 | 73.1 | 90.3 | 94.7 | 96.8 | 96.5 | 96.3 | 97.6 | 100.0 | 101.5 | 104.7 |
| **Manufacturing (1992 = 100)** | | | | | | | | | | | | |
| Productivity: | | | | | | | | | | | | |
| Output per hour of all persons | 41.8 | 54.2 | 70.1 | 92.8 | 95.0 | 100.0 | 101.9 | 105.0 | 109.0 | 112.8 | 117.1 | 124.3 |
| Output per unit of capital services | 124.3 | 116.5 | 100.9 | 101.6 | 97.5 | 100.0 | 101.1 | 104.0 | 105.0 | 104.5 | 105.6 | 106.5 |
| Multifactor productivity | 72.7 | 84.4 | 86.6 | 99.3 | 98.3 | 100.0 | 100.4 | 102.6 | 105.0 | 106.1 | 109.8 | 113.2 |
| Output | 38.5 | 56.5 | 75.3 | 97.3 | 95.4 | 100.0 | 103.3 | 108.7 | 113.4 | 116.9 | 123.5 | 130.7 |
| Inputs: | | | | | | | | | | | | |
| Hours of all persons | 92.0 | 104.2 | 107.5 | 104.8 | 100.4 | 100.0 | 101.4 | 103.6 | 104.0 | 103.7 | 105.5 | 105.2 |
| Capital services | 30.9 | 48.5 | 74.7 | 95.8 | 97.9 | 100.0 | 102.2 | 104.5 | 108.0 | 111.9 | 116.9 | 122.8 |
| Energy | 51.3 | 85 4 | 92.5 | 99.9 | 100.1 | 100.0 | 103.7 | 107.3 | 109.5 | 107.0 | 103.9 | 109.2 |
| Nonenergy materials | 38.2 | 44.8 | 75.0 | 92.5 | 93.6 | 100.0 | 105.7 | 111.3 | 112.8 | 120.4 | 120.4 | 127.2 |
| Purchased business services | 28.2 | 48.8 | 73.7 | 92.5 | 92.1 | 100.0 | 103.0 | 105.1 | 110.0 | 108.9 | 114.2 | 116.8 |
| Combined units of all factor inputs | 52.9 | 67.0 | 87.0 | 98.0 | 97.0 | 100.0 | 102.9 | 106.0 | 107.9 | 110.2 | 112.5 | 115.5 |

## 41. Annual indexes of productivity, hourly compensation, unit costs, and prices, selected years

[1992 = 100]

| Item | 1960 | 1970 | 1980 | 1990 | 1991 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 | 2000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Business** | | | | | | | | | | | | | |
| Output per hour of all persons | 48.8 | 67.0 | 80.4 | 95.2 | 96.3 | 100.5 | 101.9 | 102.6 | 105.4 | 107.6 | 110.8 | 113.8 | 118.7 |
| Compensation per hour | 13.7 | 23.5 | 54.2 | 90.7 | 95.0 | 102.5 | 104.5 | 106.7 | 110.1 | 113.3 | 119.6 | 125.1 | 131.4 |
| Real compensation per hour | 60.0 | 78.9 | 89.5 | 96.5 | 97.5 | 99.9 | 99.7 | 99.3 | 99.7 | 100.4 | 104.6 | 107.1 | 108.9 |
| Unit labor costs | 28.0 | 35.1 | 67.4 | 95.3 | 98.7 | 101.9 | 102.6 | 104.1 | 104.5 | 105.3 | 108.0 | 109.9 | 110.7 |
| Unit nonlabor payments | 25.2 | 31.6 | 61.5 | 93.9 | 97.0 | 102.5 | 106.4 | 109.4 | 113.3 | 117.1 | 115.1 | 115.1 | 119.2 |
| Implicit price deflator | 27.0 | 33.9 | 65.2 | 94.8 | 98.1 | 102.2 | 104.0 | 106.0 | 107.7 | 109.7 | 110.6 | 111.8 | 113.8 |
| **Nonfarm business** | | | | | | | | | | | | | |
| Output per hour of all persons | 51.9 | 68.9 | 82.0 | 95.3 | 96.4 | 100.5 | 101.8 | 102.8 | 105.4 | 107.3 | 110.4 | 113.2 | 118.1 |
| Compensation per hour | 14.3 | 23.7 | 54.6 | 90.5 | 95.0 | 102.2 | 104.3 | 106.6 | 109.8 | 112.9 | 119.0 | 124.2 | 130.5 |
| Real compensation per hour | 62.8 | 79.5 | 90.0 | 96.3 | 97.5 | 99.6 | 99.5 | 99.2 | 99.5 | 100.0 | 104.0 | 106.4 | 108.2 |
| Unit labor costs | 27.5 | 34.4 | 66.5 | 95.0 | 98.5 | 101.7 | 102.5 | 103.7 | 104.2 | 105.1 | 107.7 | 109.7 | 110.5 |
| Unit nonlabor payments | 24.6 | 31.3 | 60.5 | 93.6 | 97.1 | 103.0 | 106.9 | 110.4 | 113.5 | 118.0 | 116.3 | 116.8 | 121.0 |
| Implicit price deflator | 26.5 | 33.3 | 64.3 | 94.5 | 98.0 | 102.2 | 104.1 | 106.1 | 107.6 | 109.8 | 110.8 | 112.3 | 114.3 |
| **Nonfinancial corporations** | | | | | | | | | | | | | |
| Output per hour of all employees | 55.4 | 70.4 | 81.1 | 95.4 | 97.6 | 100.8 | 103.2 | 104.3 | 107.6 | 110.2 | 112.3 | 116.2 | – |
| Compensation per hour | 15.6 | 25.3 | 56.4 | 90.8 | 95.2 | 102.1 | 104.3 | 106.2 | 109.1 | 112.0 | 115.9 | 121.1 | – |
| Real compensation per hour | 68.3 | 84.7 | 93.1 | 96.6 | 97.8 | 99.6 | 99.5 | 98.9 | 98.8 | 99.3 | 101.3 | 103.7 | – |
| Total unit costs | 26.8 | 34.8 | 68.4 | 95.9 | 98.8 | 101.0 | 101.1 | 102.0 | 101.2 | 101.4 | 102.6 | 103.7 | – |
| Unit labor costs | 28.1 | 35.9 | 69.6 | 95.2 | 97.5 | 101.3 | 101.0 | 101.9 | 101.4 | 101.6 | 103.2 | 103.7 | – |
| Unit nonlabor costs | 23.3 | 31.9 | 65.1 | 98.0 | 102.1 | 100.2 | 101.3 | 102.2 | 100.6 | 100.8 | 101.2 | 102.5 | – |
| Unit profits | 50.2 | 44.4 | 68.8 | 94.3 | 93.0 | 113.2 | 131.7 | 139.0 | 152.2 | 156.7 | 148.9 | 147.6 | – |
| Unit nonlabor payments | 30.2 | 35.1 | 66.0 | 97.1 | 99.7 | 103.5 | 109.0 | 111.6 | 113.8 | 115.0 | 3.4106.6 | 114.0 | – |
| Implicit price deflator | 28.8 | 35.6 | 68.4 | 95.8 | 98.3 | 102.1 | 103.7 | 105.1 | 105.5 | 106.1 | 106.6 | 107.4 | – |
| **Manufacturing** | | | | | | | | | | | | | |
| Output per hour of all persons | 41.9 | 54.3 | 70.3 | 92.9 | 95.0 | 102.0 | 105.2 | 109.3 | 113.1 | 117.6 | 124.3 | 131.5 | 140.9 |
| Compensation per hour | 14.9 | 23.7 | 55.6 | 90.8 | 95.6 | 102.7 | 105.6 | 107.9 | 109.3 | 111.4 | 117.3 | 122.0 | 128.4 |
| Real compensation per hour | 65.2 | 79.5 | 91.7 | 96.6 | 98.1 | 100.2 | 100.8 | 100.4 | 99.0 | 98.8 | 102.6 | 104.5 | 106.4 |
| Unit labor costs | 35.5 | 43.7 | 79.1 | 97.7 | 100.6 | 100.7 | 100.4 | 98.7 | 96.6 | 94.8 | 94.4 | 92.8 | 91.1 |
| Unit nonlabor payments | 26.8 | 29.4 | 80.2 | 99.6 | 98.9 | 101.0 | 102.9 | 107.2 | 110.1 | 109.7 | 104.4 | – | – |
| Implicit price deflator | 30.2 | 34.9 | 79.8 | 98.9 | 99.6 | 100.9 | 101.9 | 103.9 | 104.9 | 103.9 | 100.5 | – | – |

Dash indicates data not available.

## 42. Annual indexes of output per hour for selected 3-digit SIC industries

[1987 = 100]

| Industry | SIC | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Mining** | | | | | | | | | | | | |
| Gold and silver ores | 104 | 101.5 | 113.3 | 122.3 | 127.4 | 141.6 | 159.8 | 160.8 | 144.2 | 138.3 | 159.0 | 186.3 |
| Bituminous coal and lignite mining | 122 | 111.7 | 117.3 | 118.7 | 122.4 | 133.0 | 141.2 | 148.1 | 155.9 | 168.0 | 176.6 | 187.3 |
| Crude petroleum and natural gas | 131 | 101.0 | 98.0 | 97.0 | 97.9 | 102.1 | 105.9 | 112.4 | 119.4 | 123.9 | 125.2 | 128.7 |
| Crushed and broken stone | 142 | 101.3 | 98.7 | 102.2 | 99.8 | 105.0 | 103.6 | 108.7 | 105.4 | 107.2 | 114.0 | 111.9 |
| **Manufacturing** | | | | | | | | | | | | |
| Meat products | 201 | 100.1 | 99.2 | 97.1 | 99.6 | 104.6 | 104.3 | 101.2 | 102.3 | 97.4 | 103.2 | 102.8 |
| Dairy products | 202 | 108.4 | 107.7 | 107.3 | 108.3 | 111.4 | 109.6 | 111.8 | 116.4 | 116.0 | 119.5 | 119.7 |
| Preserved fruits and vegetables | 203 | 97.0 | 97.8 | 95.6 | 99.2 | 100.5 | 106.8 | 107.6 | 109.1 | 109.1 | 111.7 | 116.5 |
| Grain mill products | 204 | 101.3 | 107.6 | 105.4 | 104.9 | 107.8 | 109.2 | 108.4 | 115.4 | 108.0 | 118.7 | 128.7 |
| Bakery products | 205 | 96.8 | 96.1 | 92.7 | 90.6 | 93.8 | 94.4 | 96.4 | 97.3 | 95.6 | 99.3 | 102.1 |
| Sugar and confectionery products | 206 | 99.5 | 101.8 | 103.2 | 102.0 | 99.8 | 104.5 | 106.2 | 108.3 | 113.8 | 117.1 | 123.2 |
| Fats and oils | 207 | 108.9 | 116.4 | 118.1 | 120.1 | 114.1 | 112.6 | 111.8 | 120.3 | 110.1 | 120.0 | 138.3 |
| Beverages | 208 | 105.6 | 112.2 | 117.0 | 120.0 | 127.1 | 126.4 | 130.1 | 133.5 | 135.0 | 135.5 | 137.4 |
| Miscellaneous food and kindred products | 209 | 107.0 | 99.1 | 99.2 | 101.7 | 101.5 | 105.2 | 100.9 | 102.9 | 109.1 | 103.9 | 113.2 |
| Cigarettes | 211 | 101.2 | 109.0 | 113.2 | 107.6 | 111.6 | 106.5 | 126.6 | 142.9 | 147.2 | 147.2 | 152.2 |
| Broadwoven fabric mills, cotton | 221 | 99.6 | 99.8 | 103.1 | 111.2 | 110.3 | 117.8 | 122.1 | 134.0 | 137.3 | 130.9 | 135.1 |
| Broadwoven fabric mills, manmade | 222 | 99.2 | 106.3 | 111.3 | 116.2 | 126.2 | 131.7 | 142.5 | 145.3 | 147.6 | 161.9 | 167.3 |
| Narrow fabric mills | 224 | 108.4 | 92.7 | 96.5 | 99.6 | 112.9 | 111.4 | 120.1 | 118.9 | 126.3 | 107.7 | 114.1 |
| Knitting mills | 225 | 96.6 | 108.0 | 107.5 | 114.0 | 119.3 | 127.9 | 134.1 | 138.3 | 150.3 | 149.9 | 149.9 |
| Textile finishing, except wool | 226 | 90.3 | 88.7 | 83.4 | 79.9 | 78.6 | 79.3 | 81.2 | 78.5 | 79.2 | 94.0 | 100.5 |
| Carpets and rugs | 227 | 98.6 | 97.8 | 93.2 | 89.2 | 96.1 | 97.1 | 93.3 | 95.8 | 100.2 | 100.3 | 103.0 |
| Yarn and thread mills | 228 | 102.1 | 104.2 | 110.2 | 111.4 | 119.6 | 126.6 | 130.7 | 137.4 | 147.4 | 150.1 | 154.2 |
| Miscellaneous textile goods | 229 | 101.6 | 109.1 | 109.2 | 104.6 | 106.5 | 110.4 | 118.5 | 123.7 | 123.1 | 117.9 | 120.3 |
| Men's and boys' furnishings | 232 | 100.1 | 100.1 | 102.1 | 108.4 | 109.1 | 108.4 | 111.7 | 123.4 | 134.7 | 152.4 | 166.9 |
| Women's and misses' outerwear | 233 | 101.4 | 96.8 | 104.1 | 104.3 | 109.4 | 121.8 | 127.4 | 135.5 | 141.6 | 151.5 | 153.1 |
| Women's and children's undergarments | 234 | 105.4 | 94.6 | 102.1 | 113.6 | 117.4 | 124.5 | 138.0 | 161.3 | 174.5 | 196.3 | 215.2 |
| Hats, caps, and millinery | 235 | 99.0 | 96.4 | 89.2 | 91.1 | 93.6 | 87.2 | 77.7 | 84.3 | 82.2 | 83.5 | 99.4 |
| Miscellaneous apparel and accessories | 238 | 101.3 | 88.4 | 90.6 | 91.8 | 91.3 | 94.0 | 105.5 | 116.8 | 120.1 | 105.2 | 109.8 |
| Miscellaneous fabricated textile products | 239 | 96.6 | 95.7 | 99.9 | 100.7 | 107.5 | 108.5 | 107.8 | 109.2 | 105.6 | 117.0 | 118.0 |
| Sawmills and planing mills | 242 | 100.7 | 99.6 | 99.8 | 102.6 | 108.1 | 101.9 | 103.3 | 110.2 | 115.6 | 117.5 | 120.4 |
| Millwork, plywood, and structural members | 243 | 98.8 | 97.1 | 98.0 | 98.0 | 99.9 | 97.0 | 94.5 | 92.7 | 92.4 | 89.9 | 92.5 |
| Wood containers | 244 | 103.1 | 108.8 | 111.2 | 113.1 | 109.4 | 100.1 | 100.9 | 106.1 | 106.7 | 106.6 | 107.0 |
| Wood buildings and mobile homes | 245 | 97.8 | 98.8 | 103.1 | 103.0 | 103.1 | 103.8 | 98.3 | 97.0 | 96.7 | 101.1 | 99.7 |
| Miscellaneous wood products | 249 | 95.9 | 102.4 | 107.7 | 110.5 | 114.2 | 115.3 | 111.8 | 115.4 | 114.4 | 123.1 | 132.3 |
| Household furniture | 251 | 99.4 | 102.0 | 104.5 | 107.1 | 110.5 | 110.6 | 112.5 | 116.9 | 121.6 | 121.8 | 127.5 |
| Office furniture | 252 | 94.3 | 97.5 | 95.0 | 94.1 | 102.5 | 103.2 | 100.5 | 101.1 | 106.4 | 117.9 | 113.8 |
| Public building and related furniture | 253 | 109.6 | 113.7 | 119.8 | 120.2 | 140.6 | 161.0 | 157.4 | 173.3 | 181.5 | 186.5 | 205.3 |
| Partitions and fixtures | 254 | 95.7 | 92.4 | 95.6 | 93.0 | 102.7 | 107.4 | 98.9 | 101.2 | 97.5 | 121.4 | 127.7 |
| Miscellaneous furniture and fixtures | 259 | 103.6 | 101.9 | 103.5 | 102.1 | 99.5 | 103.6 | 104.7 | 110.0 | 113.2 | 102.2 | 123.1 |
| Pulp mills | 261 | 99.6 | 107.4 | 116.7 | 128.3 | 137.3 | 122.5 | 128.9 | 131.9 | 132.6 | 104.4 | 108.9 |
| Paper mills | 262 | 103.9 | 103.6 | 102.3 | 99.2 | 103.3 | 102.4 | 110.2 | 118.6 | 111.6 | 107.0 | 110.8 |
| Paperboard mills | 263 | 105.5 | 101.9 | 100.6 | 101.4 | 104.4 | 108.4 | 114.9 | 119.5 | 118.0 | 124.2 | 127.6 |
| Paperboard containers and boxes | 265 | 99.7 | 101.5 | 101.3 | 103.4 | 105.2 | 107.9 | 108.4 | 105.1 | 106.3 | 110.1 | 114.4 |
| Miscellaneous converted paper products | 267 | 101.1 | 101.6 | 101.4 | 105.3 | 105.5 | 107.9 | 110.6 | 113.3 | 113.6 | 121.7 | 124.8 |
| Newspapers | 271 | 96.9 | 95.2 | 90.6 | 85.8 | 81.5 | 79.4 | 79.9 | 79.0 | 77.4 | 79.0 | 83.0 |
| Periodicals | 272 | 97.9 | 98.3 | 93.9 | 89.5 | 92.9 | 89.5 | 81.9 | 87.8 | 89.1 | 100.1 | 97.6 |
| Books | 273 | 99.1 | 94.1 | 96.6 | 100.8 | 97.7 | 103.5 | 103.0 | 101.6 | 99.3 | 102.2 | 97.1 |
| Miscellaneous publishing | 274 | 96.7 | 89.0 | 92.2 | 95.9 | 105.8 | 104.5 | 97.5 | 94.8 | 93.6 | 114.5 | 114.2 |
| Commercial printing | 275 | 100.0 | 101.1 | 102.5 | 102.0 | 108.0 | 106.9 | 106.5 | 107.2 | 108.3 | 109.2 | 110.7 |
| Manifold business forms | 276 | 98.7 | 89.7 | 93.0 | 89.1 | 94.5 | 91.1 | 82.0 | 76.9 | 75.2 | 78.9 | 76.4 |
| Greeting cards | 277 | 100.1 | 109.1 | 100.6 | 92.7 | 96.7 | 91.4 | 89.0 | 92.5 | 90.8 | 92.2 | 104.5 |
| Blankbooks and bookbinding | 278 | 95.6 | 94.2 | 99.4 | 96.1 | 103.6 | 98.7 | 105.4 | 108.7 | 114.5 | 115.3 | 124.7 |
| Printing trade services | 279 | 99.9 | 94.3 | 99.3 | 100.6 | 112.0 | 115.3 | 111.0 | 116.7 | 126.2 | 124.2 | 127.6 |
| Industrial inorganic chemicals | 281 | 105.7 | 104.3 | 106.8 | 109.7 | 109.7 | 105.6 | 102.3 | 109.3 | 110.1 | 116.1 | 145.7 |
| Plastics materials and synthetics | 282 | 98.8 | 99.7 | 100.9 | 100.0 | 107.5 | 112.0 | 125.3 | 128.3 | 125.3 | 133.8 | 142.6 |
| Drugs | 283 | 101.0 | 102.8 | 103.8 | 104.5 | 99.5 | 99.9 | 104.9 | 108.7 | 112.1 | 112.6 | 105.3 |
| Soaps, cleaners, and toilet goods | 284 | 102.0 | 100.6 | 103.8 | 105.3 | 104.4 | 108.7 | 111.2 | 118.6 | 120.9 | 130.4 | 129.2 |
| Paints and allied products | 285 | 101.4 | 103.3 | 106.3 | 104.3 | 102.9 | 108.8 | 116.7 | 118.0 | 125.6 | 127.2 | 128.8 |
| Industrial organic chemicals | 286 | 109.9 | 110.4 | 101.4 | 95.8 | 94.6 | 92.2 | 99.9 | 98.6 | 99.0 | 112.9 | 111.3 |
| Agricultural chemicals | 287 | 103.7 | 104.3 | 104.7 | 99.5 | 99.5 | 103.8 | 105.0 | 108.5 | 110.0 | 120.4 | 117.0 |

See footnotes at end of table.

## 42. Continued--Annual indexes of output per hour for selected 3-digit SIC industries

[1987 = 100]

| Industry | SIC | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Miscellaneous chemical products | 289 | 95.4 | 95.2 | 97.3 | 96.1 | 101.8 | 107.1 | 105.7 | 107.8 | 110.1 | 120.2 | 120.9 |
| Petroleum refining | 291 | 105.3 | 109.6 | 109.2 | 106.6 | 111.3 | 120.1 | 123.8 | 132.3 | 142.0 | 149.2 | 155.8 |
| Asphalt paving and roofing materials | 295 | 98.3 | 95.3 | 98.0 | 94.1 | 100.4 | 108.0 | 104.9 | 111.2 | 113.1 | 120.8 | 129.5 |
| Miscellaneous petroleum and coal products | 299 | 98.4 | 101.9 | 94.8 | 90.6 | 101.5 | 104.2 | 96.3 | 87.4 | 87.1 | 97.2 | 100.7 |
| Tires and inner tubes | 301 | 102.9 | 103.8 | 103.0 | 102.4 | 107.8 | 116.5 | 124.1 | 131.1 | 138.8 | 148.5 | 145.2 |
| Hose and belting and gaskets and packing | 305 | 103.7 | 96.3 | 96.1 | 92.4 | 97.8 | 99.7 | 102.7 | 104.6 | 107.4 | 112.4 | 111.7 |
| Fabricated rubber products, n.e.c. | 306 | 104.2 | 105.5 | 109.0 | 109.9 | 115.2 | 123.1 | 119.1 | 121.5 | 121.0 | 125.5 | 133.2 |
| Miscellaneous plastics products, n.e.c. | 308 | 100.5 | 101.8 | 105.7 | 108.3 | 114.4 | 116.7 | 120.8 | 121.0 | 124.7 | 130.2 | 134.6 |
| Footwear, except rubber | 314 | 101.3 | 101.1 | 101.1 | 94.4 | 104.2 | 105.2 | 113.0 | 117.1 | 126.1 | 129.4 | 111.6 |
| Flat glass | 321 | 91.9 | 90.7 | 84.5 | 83.6 | 92.7 | 97.7 | 97.6 | 99.6 | 101.5 | 107.6 | 114.0 |
| Glass and glassware, pressed or blown | 322 | 100.6 | 100.2 | 104.8 | 102.3 | 108.9 | 108.7 | 112.9 | 115.7 | 121.4 | 128.2 | 135.1 |
| Products of purchased glass | 323 | 95.9 | 90.1 | 92.6 | 97.7 | 101.5 | 106.2 | 105.9 | 106.1 | 122.0 | 125.3 | 120.0 |
| Cement, hydraulic | 324 | 103.2 | 110.2 | 112.4 | 108.3 | 115.1 | 119.9 | 125.6 | 124.3 | 128.7 | 133.1 | 134.1 |
| Structural clay products | 325 | 98.8 | 103.1 | 109.6 | 109.8 | 111.4 | 106.8 | 114.0 | 112.6 | 119.6 | 116.1 | 115.4 |
| Pottery and related products | 326 | 99.6 | 97.1 | 98.6 | 95.8 | 99.5 | 100.3 | 108.4 | 109.3 | 119.3 | 116.1 | 127.6 |
| Concrete, gypsum, and plaster products | 327 | 100.8 | 102.4 | 102.3 | 101.2 | 102.5 | 104.6 | 101.5 | 104.5 | 107.3 | 109.2 | 113.4 |
| Miscellaneous nonmetallic mineral products | 329 | 103.0 | 95.5 | 95.4 | 94.0 | 104.3 | 104.5 | 106.3 | 107.8 | 110.4 | 112.7 | 117.1 |
| Blast furnace and basic steel products | 331 | 112.6 | 108.1 | 109.7 | 107.8 | 117.0 | 133.6 | 142.4 | 142.6 | 147.5 | 155.0 | 152.3 |
| Iron and steel foundries | 332 | 104.0 | 105.4 | 106.1 | 104.5 | 107.2 | 112.1 | 113.0 | 112.7 | 116.2 | 121.7 | 121.7 |
| Primary nonferrous metals | 333 | 107.8 | 106.1 | 102.3 | 110.7 | 101.9 | 107.9 | 105.3 | 111.0 | 110.8 | 116.0 | 125.0 |
| Nonferrous rolling and drawing | 335 | 95.5 | 93.6 | 92.7 | 91.0 | 96.0 | 98.3 | 101.2 | 99.2 | 104.0 | 112.3 | 115.0 |
| Nonferrous foundries (castings) | 336 | 102.6 | 105.1 | 104.0 | 103.6 | 103.6 | 108.5 | 112.1 | 117.8 | 122.3 | 126.4 | 131.1 |
| Miscellaneous primary metal products | 339 | 106.6 | 105.0 | 113.7 | 109.1 | 114.5 | 111.3 | 134.5 | 152.2 | 149.6 | 140.9 | 139.7 |
| Metal cans and shipping containers | 341 | 106.5 | 108.5 | 117.6 | 122.9 | 127.8 | 132.3 | 140.9 | 144.2 | 155.2 | 160.8 | 155.8 |
| Cutlery, handtools, and hardware | 342 | 97.8 | 101.7 | 97.3 | 96.8 | 100.1 | 104.0 | 109.2 | 111.3 | 118.2 | 113.1 | 115.2 |
| Plumbing and heating, except electric | 343 | 103.7 | 101.5 | 102.6 | 102.0 | 98.4 | 102.0 | 109.1 | 109.2 | 118.6 | 127.2 | 131.3 |
| Fabricated structural metal products | 344 | 100.4 | 96.9 | 98.8 | 100.0 | 103.9 | 104.8 | 107.7 | 105.8 | 106.5 | 110.0 | 112.5 |
| Metal forgings and stampings | 346 | 101.5 | 99.8 | 95.6 | 92.9 | 103.7 | 108.7 | 108.5 | 109.3 | 113.6 | 120.2 | 125.9 |
| Metal services, n.e.c. | 347 | 108.3 | 102.4 | 104.7 | 99.4 | 111.6 | 120.6 | 123.0 | 127.7 | 128.4 | 123.5 | 128.5 |
| Ordnance and accessories, n.e.c. | 348 | 97.7 | 89.8 | 82.1 | 81.5 | 88.6 | 84.6 | 83.6 | 87.6 | 87.5 | 100.5 | 94.6 |
| Miscellaneous fabricated metal products | 349 | 101.4 | 95.9 | 97.5 | 97.4 | 101.1 | 102.0 | 103.2 | 106.6 | 108.3 | 106.2 | 112.4 |
| Engines and turbines | 351 | 106.8 | 110.7 | 106.5 | 105.8 | 103.3 | 109.2 | 122.3 | 122.7 | 136.6 | 134.2 | 142.8 |
| Farm and garden machinery | 352 | 106.3 | 110.7 | 116.5 | 112.9 | 113.9 | 118.6 | 125.0 | 134.7 | 137.2 | 141.0 | 148.7 |
| Construction and related machinery | 353 | 106.5 | 108.3 | 107.0 | 99.1 | 102.0 | 108.2 | 117.7 | 122.1 | 123.3 | 131.8 | 137.1 |
| Metalworking machinery | 354 | 101.0 | 103.5 | 101.1 | 96.4 | 104.3 | 107.4 | 109.9 | 114.8 | 114.9 | 118.6 | 120.2 |
| Special industry machinery | 355 | 104.6 | 108.3 | 107.5 | 108.3 | 106.0 | 113.6 | 121.2 | 132.3 | 134.0 | 130.1 | 125.9 |
| General industrial machinery | 356 | 105.9 | 101.5 | 101.5 | 101.6 | 101.6 | 104.8 | 106.7 | 109.0 | 109.4 | 110.1 | 112.4 |
| Computer and office equipment | 357 | 121.4 | 124.2 | 138.1 | 149.6 | 195.7 | 258.6 | 328.6 | 469.4 | 681.3 | 937.0 | 1345.8 |
| Refrigeration and service machinery | 358 | 102.1 | 106.0 | 103.6 | 100.7 | 104.9 | 108.6 | 110.7 | 112.7 | 114.7 | 114.8 | 121.3 |
| Industrial machinery, n.e.c. | 359 | 106.5 | 107.1 | 107.3 | 109.0 | 117.0 | 118.5 | 127.4 | 138.8 | 141.4 | 129.7 | 127.6 |
| Electric distribution equipment | 361 | 105.4 | 105.0 | 106.3 | 106.5 | 119.6 | 122.2 | 131.8 | 143.0 | 143.9 | 143.9 | 147.8 |
| Electrical industrial apparatus | 362 | 104.6 | 107.4 | 107.7 | 107.1 | 117.1 | 132.9 | 134.9 | 150.8 | 154.3 | 163.9 | 162.6 |
| Household appliances | 363 | 103.0 | 104.7 | 105.8 | 106.5 | 115.0 | 123.4 | 131.4 | 127.3 | 127.4 | 138.1 | 151.7 |
| Electric lighting and wiring equipment | 364 | 101.9 | 100.2 | 99.9 | 97.5 | 105.7 | 107.8 | 113.4 | 113.7 | 116.9 | 121.4 | 129.3 |
| Communications equipment | 366 | 110.5 | 107.2 | 121.4 | 124.5 | 146.7 | 150.3 | 166.0 | 170.9 | 190.3 | 221.0 | 228.4 |
| Electronic components and accessories | 367 | 109.0 | 119.8 | 133.4 | 154.7 | 189.3 | 217.9 | 274.1 | 401.5 | 514.9 | 610.5 | 764.4 |
| Miscellaneous electrical equipment & supplies | 369 | 102.8 | 99.6 | 90.6 | 98.6 | 101.3 | 108.2 | 110.5 | 114.1 | 123.1 | 124.6 | 130.5 |
| Motor vehicles and equipment | 371 | 103.2 | 103.3 | 102.4 | 96.6 | 104.2 | 106.2 | 108.8 | 106.7 | 107.2 | 116.5 | 125.7 |
| Aircraft and parts | 372 | 100.6 | 98.2 | 98.9 | 108.2 | 112.3 | 115.2 | 109.6 | 107.9 | 113.0 | 114.1 | 140.4 |
| Ship and boat building and repairing | 373 | 99.4 | 97.6 | 103.7 | 96.3 | 102.7 | 106.2 | 103.8 | 98.0 | 99.2 | 104.3 | 101.6 |
| Railroad equipment | 374 | 113.5 | 135.3 | 141.1 | 146.9 | 147.9 | 151.0 | 152.5 | 150.0 | 148.3 | 183.2 | 191.7 |
| Motorcycles, bicycles, and parts | 375 | 92.6 | 94.6 | 93.8 | 99.8 | 108.4 | 130.9 | 125.1 | 120.3 | 125.5 | 120.6 | 127.8 |
| Guided missiles, space vehicles, parts | 376 | 104.1 | 110.6 | 116.5 | 110.5 | 110.5 | 122.1 | 118.9 | 121.0 | 129.4 | 126.6 | 132.1 |
| Search and navigation equipment | 381 | 104.8 | 105.8 | 112.7 | 118.9 | 122.1 | 129.1 | 132.1 | 149.5 | 142.2 | 148.9 | 148.8 |
| Measuring and controlling devices | 382 | 103.7 | 101.7 | 106.4 | 113.1 | 119.9 | 124.0 | 133.8 | 146.4 | 150.5 | 143.0 | 147.3 |
| Medical instruments and supplies | 384 | 105.2 | 107.9 | 116.9 | 118.7 | 123.5 | 127.3 | 126.7 | 131.5 | 139.8 | 146.3 | 159.4 |
| Ophthalmic goods | 385 | 112.6 | 123.3 | 121.2 | 125.1 | 144.5 | 157.8 | 160.6 | 167.2 | 188.2 | 202.6 | 211.7 |
| Photographic equipment & supplies | 386 | 105.6 | 113.0 | 107.8 | 110.2 | 116.4 | 126.9 | 132.7 | 129.5 | 128.7 | 121.6 | 125.9 |
| Jewelry, silverware, and plated ware | 391 | 100.1 | 102.9 | 99.3 | 95.8 | 96.7 | 96.7 | 99.5 | 100.2 | 102.6 | 117.2 | 111.7 |
| Musical instruments | 393 | 101.8 | 96.1 | 97.1 | 96.9 | 96.0 | 95.6 | 88.7 | 86.9 | 78.8 | 83.9 | 83.5 |

## 42. Continued--Annual indexes of output per hour for selected 3-digit SIC industries

[1987 = 100]

| Industry | SIC | 1988 | 1989 | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Toys and sporting goods | 394 | 104.8 | 106.0 | 108.1 | 109.7 | 104.9 | 114.2 | 109.7 | 113.6 | 119.9 | 125.1 | 134.8 |
| Pens, pencils, office, and art supplies | 395 | 108.3 | 112.9 | 118.2 | 116.8 | 111.3 | 111.6 | 129.9 | 135.2 | 144.1 | 127.9 | 147.6 |
| Costume jewelry and notions | 396 | 102.0 | 93.8 | 105.3 | 106.7 | 110.8 | 115.8 | 129.0 | 143.7 | 142.2 | 116.1 | 122.9 |
| Miscellaneous manufactures | 399 | 102.1 | 100.9 | 106.5 | 109.2 | 109.5 | 107.7 | 106.1 | 108.1 | 112.8 | 109.3 | 109.5 |
| **Transportation** | | | | | | | | | | | | |
| Railroad transportation | 4011 | 108.4 | 114.6 | 118.5 | 127.8 | 139.6 | 145.4 | 150.3 | 156.2 | 167.0 | 170.1 | – |
| Trucking, except local [1] | 4213 | 105.2 | 109.3 | 111.1 | 116.9 | 123.4 | 126.6 | 129.5 | 125.4 | 130.9 | 132.4 | 130.1 |
| U.S. postal service [2] | 431 | 99.9 | 99.7 | 104.0 | 103.7 | 104.5 | 107.1 | 106.6 | 106.5 | 104.7 | 108.3 | 109.5 |
| Air transportation [1] | 4512,13,22 (pts.) | 99.5 | 95.8 | 92.9 | 92.5 | 96.9 | 100.2 | 105.7 | 108.6 | 111.1 | 111.6 | 108.5 |
| **Utitlities** | | | | | | | | | | | | |
| Telephone communications | 481 | 106.2 | 111.6 | 113.3 | 119.8 | 127.7 | 135.5 | 142.2 | 148.1 | 159.5 | 160.9 | 171.2 |
| Radio and television broadcasting | 483 | 103.1 | 106.2 | 104.9 | 106.1 | 108.3 | 106.7 | 110.1 | 109.6 | 105.8 | 101.1 | 100.8 |
| Cable and other pay TV services | 484 | 102.0 | 99.7 | 92.5 | 87.5 | 88.3 | 86.7 | 85.6 | 86.7 | 84.4 | 87.6 | 88.0 |
| Electric utilities | 491,3 (pt.) | 104.9 | 107.7 | 110.1 | 113.4 | 115.2 | 120.6 | 126.8 | 135.0 | 146.5 | 150.5 | 157.2 |
| Gas utilities | 492,3 (pt.) | 108.3 | 111.2 | 105.8 | 109.6 | 111.1 | 121.8 | 125.6 | 137.1 | 145.9 | 158.6 | 153.4 |
| **Trade** | | | | | | | | | | | | |
| Lumber and other building materials dealers | 521 | 101.0 | 99.1 | 103.6 | 101.3 | 105.4 | 110.5 | 118.3 | 117.6 | 121.7 | 122.2 | 133.0 |
| Paint, glass, and wallpaper stores | 523 | 102.8 | 101.7 | 106.0 | 99.4 | 106.5 | 114.7 | 130.2 | 135.3 | 140.2 | 143.8 | 166.0 |
| Hardware stores | 525 | 108.6 | 115.2 | 110.5 | 102.5 | 107.2 | 105.8 | 112.7 | 108.5 | 112.1 | 111.2 | 125.3 |
| Retail nurseries, lawn and garden supply stores | 526 | 106.7 | 103.4 | 83.9 | 88.5 | 100.4 | 106.6 | 116.6 | 117.2 | 136.6 | 128.1 | 136.1 |
| Department stores | 531 | 99.2 | 97.0 | 94.2 | 98.2 | 100.9 | 105.7 | 108.6 | 110.9 | 118.4 | 123.5 | 129.4 |
| Variety stores | 533 | 101.9 | 124.4 | 151.2 | 154.2 | 167.7 | 184.7 | 190.1 | 203.2 | 229.2 | 247.6 | 262.5 |
| Miscellaneous general merchandise stores | 539 | 100.8 | 109.8 | 116.4 | 121.8 | 136.1 | 159.7 | 160.9 | 163.9 | 164.9 | 168.2 | 189.9 |
| Grocery stores | 541 | 98.9 | 95.4 | 94.6 | 93.7 | 93.3 | 92.8 | 92.5 | 91.2 | 89.4 | 89.2 | 90.2 |
| Meat and fish (seafood) markets | 542 | 99.0 | 97.6 | 96.8 | 88.4 | 95.8 | 93.7 | 91.1 | 89.1 | 81.1 | 84.7 | 89.9 |
| Retail bakeries | 546 | 89.8 | 83.3 | 89.7 | 94.7 | 94.0 | 86.5 | 87.2 | 86.8 | 81.7 | 75.4 | 65.0 |
| New and used car dealers | 551 | 103.4 | 102.5 | 106.1 | 104.1 | 106.5 | 107.6 | 108.7 | 107.1 | 108.2 | 107.8 | 108.0 |
| Auto and home supply stores | 553 | 103.2 | 101.6 | 102.7 | 99.0 | 100.0 | 98.7 | 102.6 | 105.7 | 104.6 | 104.2 | 107.0 |
| Gasoline service stations | 554 | 103.0 | 105.2 | 102.6 | 104.3 | 109.7 | 115.2 | 120.4 | 126.3 | 125.1 | 125.0 | 130.6 |
| Men's and boy's wear stores | 561 | 106.0 | 109.6 | 113.7 | 119.2 | 118.2 | 115.5 | 117.9 | 117.5 | 125.7 | 132.2 | 145.5 |
| Women's clothing stores | 562 | 97.8 | 99.5 | 101.5 | 103.0 | 112.2 | 118.4 | 119.3 | 128.5 | 142.3 | 145.8 | 154.8 |
| Family clothing stores | 565 | 102.0 | 104.9 | 104.5 | 106.4 | 111.7 | 114.5 | 120.4 | 133.8 | 138.8 | 142.1 | 145.6 |
| Shoe stores | 566 | 102.7 | 107.2 | 106.1 | 105.1 | 111.5 | 113.2 | 126.3 | 134.5 | 146.9 | 143.5 | 136.4 |
| Furniture and homefurnishings stores | 571 | 98.6 | 100.9 | 101.8 | 101.5 | 108.4 | 107.6 | 108.8 | 112.0 | 118.6 | 119.4 | 121.6 |
| Household appliance stores | 572 | 98.5 | 103.5 | 102.8 | 105.2 | 113.9 | 117.0 | 121.2 | 138.7 | 141.8 | 155.5 | 184.5 |
| Radio, television, computer, and music stores | 573 | 118.6 | 114.6 | 119.6 | 128.3 | 137.8 | 152.7 | 177.0 | 196.7 | 204.6 | 215.1 | 258.9 |
| Eating and drinking places | 581 | 102.8 | 102.2 | 104.0 | 103.1 | 102.5 | 102.8 | 101.1 | 100.9 | 99.5 | 100.5 | 101.1 |
| Drug and proprietary stores | 591 | 101.9 | 102.5 | 103.6 | 104.7 | 103.6 | 105.4 | 105.7 | 106.9 | 109.6 | 115.4 | 117.7 |
| Liquor stores | 592 | 98.2 | 101.1 | 105.2 | 105.9 | 108.4 | 100.7 | 99.1 | 103.7 | 112.8 | 108.9 | 113.9 |
| Used merchandise stores | 593 | 105.3 | 104.9 | 100.3 | 98.6 | 110.4 | 112.1 | 115.4 | 117.3 | 129.8 | 138.0 | 158.4 |
| Miscellaneous shopping goods stores | 594 | 100.7 | 104.2 | 104.2 | 105.0 | 102.7 | 106.5 | 111.9 | 117.8 | 120.0 | 123.7 | 131.5 |
| Nonstore retailers | 596 | 105.6 | 110.8 | 108.8 | 109.3 | 122.1 | 127.5 | 143.3 | 146.1 | 165.5 | 177.2 | 193.5 |
| Fuel dealers | 598 | 95.6 | 92.0 | 84.4 | 85.3 | 84.4 | 92.7 | 100.7 | 114.2 | 115.8 | 113.4 | 112.0 |
| Retail stores, n.e.c. | 599 | 105.9 | 103.1 | 113.7 | 103.2 | 111.6 | 117.3 | 125.0 | 126.2 | 139.5 | 147.3 | 157.6 |
| **Finance and Services** | | | | | | | | | | | | |
| Commercial banks | 602 | 102.8 | 104.8 | 107.7 | 110.1 | 111.0 | 118.5 | 121.7 | 126.4 | 129.7 | 133.0 | 133.0 |
| Hotels and motels | 701 | 97.6 | 95.0 | 96.1 | 99.1 | 107.8 | 106.2 | 109.6 | 110.1 | 109.7 | 107.9 | 108.8 |
| Laundry, cleaning, and garment services | 721 | 97.2 | 99.7 | 101.8 | 99.2 | 98.3 | 98.9 | 104.0 | 105.5 | 108.7 | 108.0 | 113.5 |
| Photographic studios, portrait | 722 | 100.1 | 94.9 | 96.6 | 92.8 | 97.7 | 105.9 | 117.4 | 129.3 | 126.6 | 133.7 | 153.4 |
| Beauty shops | 723 | 95.1 | 99.6 | 96.8 | 94.8 | 99.6 | 95.7 | 99.8 | 103.5 | 106.3 | 107.5 | 108.4 |
| Barber shops | 724 | 108.8 | 111.6 | 100.2 | 94.1 | 112.1 | 120.8 | 117.7 | 114.6 | 127.6 | 149.0 | 153.0 |
| Funeral services and crematories | 726 | 102.5 | 97.9 | 90.9 | 89.5 | 103.2 | 98.2 | 103.8 | 99.7 | 97.1 | 101.3 | 107.0 |
| Automotive repair shops | 753 | 105.7 | 108.1 | 106.9 | 98.7 | 103.3 | 104.0 | 112.3 | 119.5 | 114.1 | 115.2 | 121.2 |
| Motion picture theaters | 783 | 107.1 | 114.3 | 115.8 | 116.0 | 110.8 | 109.8 | 106.5 | 101.4 | 100.5 | 99.8 | 101.3 |

[1] Refers to output per employee.

[2] Refers to ouput per full-time equivalent employee year on fiscal basis.

n.e.c. = not elsewhere classified

- Data not available.

## 43. Unemployment rates, approximating U.S. concepts, in nine countries, quarterly data seasonally adjusted

| Country | Annual average | | 1998 | | 1999 | | | | 2000 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | 1998 | 1999 | III | IV | I | II | III | IV | I | II |
| United States | 4.5 | 4.2 | 4.5 | 4.4 | 4.3 | 4.3 | 4.2 | 4.1 | 4.1 | 4.0 |
| Canada | 8.3 | 7.6 | 8.2 | 8.1 | 7.9 | 7.8 | 7.6 | 7.0 | 6.8 | 6.7 |
| Australia | 8.0 | 7.2 | 8.1 | 7.7 | 7.5 | 7.4 | 7.1 | 7.0 | 6.8 | 6.7 |
| Japan | 4.1 | 4.7 | 4.3 | 4.5 | 4.7 | 4.8 | 4.8 | 4.7 | 4.9 | 4.8 |
| France | 11.8 | 11.1 | 11.8 | 11.6 | 11.3 | 11.2 | 11.0 | 10.6 | 10.2 | 9.8 |
| Germany | 9.3 | 8.7 | 9.1 | 8.9 | 8.8 | 8.8 | 8.8 | 8.7 | 8.4 | 8.3 |
| Italy[1] | 12.0 | 11.5 | 12.0 | 12.0 | 11.9 | 11.6 | 11.6 | 11.1 | 11.2 | 10.8 |
| Sweden | 8.4 | 7.1 | 8.5 | 7.6 | 7.2 | 7.0 | 7.0 | 7.1 | 6.8 | 6.0 |
| United Kingdom | 6.3 | 6.1 | 6.3 | 6.2 | 6.3 | 6.1 | 5.9 | 5.9 | 5.8 | 5.5 |

[1] Quarterly rates are for the first month of the quarter.

NOTE: Quarterly figures for France, Germany, and the United Kingdom calculated by applying annual adjustment factors to current published data, and therefore should be viewed as less precise indicators of unemployment under U.S. concepts than the annual figures. See Notes on the data" for information on breaks in series. For further qualifications and historical data, see *Comparative Civilian Labor Force Statistics, Ten Countries,1959–1998* (Bureau of Labor Statistics, Oct. 22, 1999).

## 44. Annual data: Employment status of the working-age population, approximating U.S. concepts, 10 countries

[Numbers in thousands]

| Employment status and country | 1990 | 1991 | 1992 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 | 1999 |
|---|---|---|---|---|---|---|---|---|---|---|
| **Civilian labor force** | | | | | | | | | | |
| United States[1] | 125,840 | 126,346 | 128,105 | 129,200 | 131,056 | 132,304 | 133,943 | 136,297 | 137,673 | 139,368 |
| Canada | 14,241 | 14,330 | 14,362 | 14,505 | 14,627 | 14,750 | 14,900 | 15,153 | 15,418 | 15,721 |
| Australia | 8,444 | 8,490 | 8,562 | 8,619 | 8,776 | 9,001 | 9,127 | 9,221 | 9,347 | 9,470 |
| Japan | 63,050 | 64,280 | 65,040 | 65,470 | 65,780 | 65,990 | 66,450 | 67,200 | 67,240 | 67,100 |
| France | 24,300 | 24,490 | 24,550 | 24,650 | 24,760 | 24,820 | 25,090 | 25,180 | 25,360 | 25,590 |
| Germany[2] | 29,410 | 39,130 | 39,040 | 39,140 | 39,210 | 39,100 | 39,180 | 39,450 | 39,430 | – |
| Italy | 22,670 | 22,940 | 22,910 | 22,570 | 22,450 | 22,460 | 22,570 | 22,680 | 22,960 | 23,130 |
| Netherlands | 6,640 | 6,750 | 6,950 | 7,090 | 7,190 | 7,270 | 7,370 | 7,530 | 7,720 | – |
| Sweden | 4,597 | 4,591 | 4,520 | 4,443 | 4,418 | 4,460 | 4,459 | 4,418 | 4,402 | 4,430 |
| United Kingdom | 28,730 | 28,610 | 28,410 | 28,310 | 28,280 | 28,480 | 28,620 | 28,760 | 28,870 | 29,090 |
| **Participation rate[3]** | | | | | | | | | | |
| United States[1] | 66.5 | 66.2 | 66.4 | 66.3 | 66.6 | 66.6 | 66.8 | 67.1 | 67.1 | 67.1 |
| Canada | 67.1 | 66.5 | 65.7 | 65.4 | 65.2 | 64.9 | 64.7 | 64.9 | 65.1 | 65.6 |
| Australia | 64.6 | 64.1 | 63.9 | 63.6 | 63.9 | 64.6 | 64.6 | 64.3 | 64.4 | 64.2 |
| Japan | 62.6 | 63.2 | 63.4 | 63.3 | 63.1 | 62.9 | 63.0 | 63.2 | 62.8 | 62.4 |
| France | 56.0 | 56.0 | 55.8 | 55.6 | 55.5 | 55.2 | 55.5 | 55.3 | 55.4 | 55.7 |
| Germany[2] | 55.3 | 58.9 | 58.3 | 58.0 | 57.6 | 57.3 | 57.4 | 57.6 | 57.6 | – |
| Italy | 47.2 | 47.7 | 47.5 | 47.9 | 47.3 | 47.1 | 47.1 | 47.2 | 47.6 | 47.8 |
| Netherlands | 56.1 | 56.5 | 57.8 | 58.5 | 59.0 | 59.3 | 59.8 | 60.7 | 62.0 | – |
| Sweden | 67.4 | 67.0 | 65.7 | 64.5 | 63.7 | 64.1 | 64.0 | 63.3 | 62.8 | 63.2 |
| United Kingdom | 64.1 | 63.7 | 63.1 | 62.8 | 62.5 | 62.7 | 62.7 | 62.8 | 62.7 | 62.9 |
| **Employed** | | | | | | | | | | |
| United States[1] | 118,793 | 117,718 | 118,492 | 120,259 | 123,060 | 124,900 | 126,708 | 129,558 | 131,463 | 133,488 |
| Canada | 13,084 | 12,851 | 12,760 | 12,858 | 13,112 | 13,357 | 13,463 | 13,774 | 14,140 | 14,531 |
| Australia | 7,859 | 7,676 | 7,637 | 7,680 | 7,921 | 8,235 | 8,344 | 8,429 | 8,597 | 8,785 |
| Japan | 61,710 | 62,920 | 63,620 | 63,810 | 63,860 | 63,890 | 64,200 | 64,900 | 64,450 | 63,930 |
| France | 22,100 | 22,140 | 21,990 | 21,740 | 21,710 | 21,890 | 21,960 | 22,060 | 22,390 | 22,760 |
| Germany[2] | 27,950 | 36,920 | 36,420 | 36,030 | 35,890 | 35,900 | 35,680 | 35,540 | 35,720 | – |
| Italy | 21,080 | 21,360 | 21,230 | 20,270 | 19,940 | 19,820 | 19,920 | 19,990 | 20,210 | 20,460 |
| Netherlands | 6,230 | 6,350 | 6,560 | 6,620 | 6,670 | 6,760 | 6,900 | 7,130 | 7,410 | – |
| Sweden | 4,513 | 4,447 | 4,265 | 4,028 | 3,992 | 4,056 | 4,019 | 3,973 | 4,034 | 4,117 |
| United Kingdom | 26,740 | 26,090 | 25,530 | 25,340 | 25,550 | 26,000 | 26,280 | 26,740 | 27,050 | 27,330 |
| **Employment-population ratio[4]** | | | | | | | | | | |
| United States[1] | 62.8 | 61.7 | 61.5 | 61.7 | 62.5 | 62.9 | 63.2 | 63.8 | 64.1 | 64.3 |
| Canada | 61.7 | 59.7 | 58.4 | 58.0 | 58.4 | 58.8 | 58.5 | 59.0 | 59.7 | 60.6 |
| Australia | 60.1 | 57.9 | 57.0 | 56.6 | 57.7 | 59.1 | 59.1 | 58.8 | 59.2 | 59.6 |
| Japan | 61.3 | 61.8 | 62.0 | 61.7 | 61.3 | 60.9 | 60.9 | 61.0 | 60.2 | 59.4 |
| France | 50.9 | 50.6 | 49.9 | 49.0 | 48.7 | 48.7 | 48.5 | 48.4 | 48.9 | 49.6 |
| Germany[2] | 52.6 | 55.5 | 54.4 | 53.4 | 52.8 | 52.6 | 52.2 | 51.9 | 52.2 | – |
| Italy | 43.9 | 44.5 | 44.0 | 43.0 | 42.0 | 41.5 | 41.6 | 41.6 | 41.9 | 42.3 |
| Netherlands | 52.6 | 53.2 | 54.5 | 54.7 | 54.7 | 55.1 | 55.9 | 57.5 | 59.5 | – |
| Sweden | 66.1 | 64.9 | 62.0 | 58.5 | 57.6 | 58.3 | 57.7 | 56.9 | 57.6 | 58.7 |
| United Kingdom | 59.6 | 58.0 | 56.7 | 56.2 | 56.5 | 57.2 | 57.6 | 58.3 | 58.7 | 59.1 |
| **Unemployed** | | | | | | | | | | |
| United States[1] | 7,047 | 8,628 | 9,613 | 8,940 | 7,996 | 7,404 | 7,236 | 6,739 | 6,210 | 6,210 |
| Canada | 1,157 | 1,480 | 1,602 | 1,647 | 1,515 | 1,393 | 1,437 | 1,379 | 1,277 | 1,190 |
| Australia | 585 | 814 | 925 | 939 | 856 | 766 | 783 | 791 | 750 | 685 |
| Japan | 1,340 | 1,360 | 1,420 | 1,660 | 1,920 | 2,100 | 2,250 | 2,300 | 2,790 | 3,170 |
| France | 2,210 | 2,350 | 2,560 | 2,910 | 3,050 | 2,920 | 3,130 | 3,120 | 2,980 | 2,830 |
| Germany[2] | 1,460 | 2,210 | 2,620 | 3,110 | 3,320 | 3,200 | 3,500 | 3,910 | 3,710 | – |
| Italy | 1,590 | 1,580 | 1,680 | 2,300 | 2,510 | 2,640 | 2,650 | 2,690 | 2,750 | 2,670 |
| Netherlands | 410 | 400 | 390 | 470 | 520 | 510 | 470 | 400 | 310 | – |
| Sweden | 84 | 144 | 255 | 415 | 426 | 404 | 440 | 445 | 368 | 313 |
| United Kingdom | 1,990 | 2,520 | 2,880 | 2,970 | 2,730 | 2,480 | 2,340 | 2,020 | 1,820 | 1,760 |
| **Unemployment rate** | | | | | | | | | | |
| United States[1] | 5.6 | 6.8 | 7.5 | 6.9 | 6.1 | 5.6 | 5.4 | 4.9 | 4.5 | 4.2 |
| Canada | 8.1 | 10.3 | 11.2 | 11.4 | 10.4 | 9.4 | 9.6 | 9.1 | 8.3 | 7.6 |
| Australia | 6.9 | 9.6 | 10.8 | 10.9 | 9.7 | 8.5 | 8.6 | 8.6 | 8.0 | 7.2 |
| Japan | 2.1 | 2.1 | 2.2 | 2.5 | 2.9 | 3.2 | 3.4 | 3.4 | 4.1 | 4.7 |
| France | 9.1 | 9.6 | 10.4 | 11.8 | 12.3 | 11.8 | 12.5 | 12.4 | 11.8 | 11.1 |
| Germany[2] | 5.0 | 5.6 | 6.7 | 7.9 | 8.5 | 8.2 | 8.9 | 9.9 | 9.4 | 9.0 |
| Italy | 7.0 | 6.9 | 7.3 | 10.2 | 11.2 | 11.8 | 11.7 | 11.9 | 12.0 | 11.5 |
| Netherlands | 6.2 | 5.9 | 5.6 | 6.6 | 7.2 | 7.0 | 6.4 | 5.3 | 4.0 | – |
| Sweden | 1.8 | 3.1 | 5.6 | 9.3 | 9.6 | 9.1 | 9.9 | 10.1 | 8.4 | 7.1 |
| United Kingdom | 6.9 | 8.8 | 10.1 | 10.5 | 9.7 | 8.7 | 8.2 | 7.0 | 6.3 | 6.1 |

[1] Data for 1994 are not directly comparable with data for 1993 and earlier years. For additional information, see the box note under "Employment and Unemployment Data" in the notes to this section.

[2] Data from 1991 onward refer to unified Germany. See *Comparative Civilian Labor Force Statistics, Ten Countries, 1959–1998*, October 22, 1999, on the Internet at **http://stats.bls.gov/fisdata.htm**.

[3] Labor force as a percent of the working-age population.

[4] Employment as a percent of the working-age population.

NOTE: See "Notes on the data" for information on breaks in series for the United States, France, Germany, Italy, the Netherlands, and Sweden. Dash indicates data not available.

## 45. Annual indexes of manufacturing productivity and related measures, 12 countries

[1992 = 100]

| Item and country | 1960 | 1970 | 1980 | 1987 | 1988 | 1989 | 1990 | 1991 | 1993 | 1994 | 1995 | 1996 | 1997 | 1998 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Output per hour** | | | | | | | | | | | | | | |
| United States | – | – | 71.9 | 94.4 | 98.0 | 97.1 | 97.8 | 98.3 | 102.1 | 108.3 | 114.9 | 117.3 | 122.1 | 127.9 |
| Canada | 40.7 | 59.2 | 75.3 | 91.3 | 91.1 | 92.4 | 95.3 | 95.1 | 102.5 | 106.2 | 108.9 | 107.3 | 111.0 | 111.7 |
| Japan | 14.0 | 38.0 | 63.9 | 81.2 | 84.8 | 89.5 | 95.4 | 99.4 | 100.5 | 101.8 | 109.3 | 115.8 | 121.4 | 120.4 |
| Belgium | 18.0 | 32.9 | 65.4 | 88.9 | 92.0 | 96.9 | 96.8 | 99.1 | 102.5 | 108.4 | 113.2 | 114.7 | 121.8 | 122.6 |
| Denmark | 29.9 | 52.7 | 90.3 | 90.6 | 94.1 | 99.6 | 99.1 | 99.6 | 104.5 | – | – | – | – | – |
| France | 21.8 | 43.1 | 66.7 | 81.8 | 87.4 | 91.9 | 93.5 | 96.9 | 100.6 | 108.5 | 114.4 | 114.9 | 123.2 | 127.4 |
| Germany | 29.2 | 52.0 | 77.2 | 88.1 | 91.5 | 94.6 | 99.0 | 101.9 | 100.6 | 107.9 | 111.2 | 115.1 | 121.8 | 127.1 |
| Italy | 19.6 | 36.8 | 64.1 | 85.1 | 86.7 | 89.4 | 92.5 | 95.2 | 102.9 | 105.6 | 109.3 | 110.3 | 113.4 | 113.6 |
| Netherlands | 18.6 | 38.1 | 69.2 | 91.6 | 93.7 | 97.1 | 98.6 | 99.6 | 101.4 | 112.7 | 117.7 | 119.7 | 125.7 | 127.8 |
| Norway | 36.7 | 57.8 | 76.7 | 93.3 | 92.1 | 94.6 | 96.6 | 97.5 | 100.6 | 101.4 | 102.0 | 102.0 | 101.9 | 104.1 |
| Sweden | 27.6 | 52.8 | 74.0 | 90.1 | 90.8 | 93.8 | 95.0 | 95.0 | 106.7 | 116.1 | 122.4 | 125.4 | 133.6 | 136.5 |
| United Kingdom | 31.2 | 44.7 | 56.1 | 79.4 | 82.3 | 86.2 | 88.3 | 92.2 | 104.0 | 106.8 | 104.8 | 103.2 | 104.0 | 105.1 |
| **Output** | | | | | | | | | | | | | | |
| United States | – | – | 77.3 | 97.9 | 104.5 | 104.0 | 102.5 | 98.7 | 103.5 | 112.2 | 119.6 | 121.6 | 128.8 | 135.0 |
| Canada | 34.2 | 60.5 | 85.4 | 103.2 | 109.3 | 110.8 | 106.6 | 98.8 | 105.1 | 113.2 | 118.8 | 120.2 | 128.0 | 133.0 |
| Japan | 10.7 | 38.8 | 59.9 | 78.4 | 84.6 | 90.2 | 96.3 | 101.4 | 96.0 | 95.4 | 100.6 | 106.7 | 111.1 | 103.6 |
| Belgium | 30.7 | 57.6 | 78.2 | 88.8 | 93.3 | 99.1 | 101.0 | 100.7 | 97.0 | 101.4 | 104.2 | 104.2 | 109.0 | 111.8 |
| Denmark | 40.8 | 68.0 | 91.3 | 99.3 | 100.8 | 104.3 | 102.7 | 101.7 | 99.0 | 109.3 | 114.7 | 117.8 | 120.3 | 126.5 |
| France | 31.0 | 64.1 | 88.7 | 87.2 | 92.2 | 97.2 | 99.1 | 99.8 | 95.7 | 100.3 | 104.8 | 104.5 | 110.2 | 114.6 |
| Germany | 41.5 | 70.9 | 85.3 | 88.0 | 90.9 | 94.0 | 99.1 | 102.8 | 91.8 | 93.5 | 93.7 | 92.5 | 95.8 | 100.7 |
| Italy | 21.4 | 44.7 | 78.4 | 88.2 | 94.5 | 98.1 | 99.6 | 99.2 | 96.4 | 102.2 | 107.2 | 106.7 | 110.4 | 112.5 |
| Netherlands | 31.7 | 59.5 | 77.4 | 89.5 | 92.8 | 96.9 | 100.1 | 100.6 | 98.2 | 104.2 | 107.8 | 108.4 | 114.1 | 116.6 |
| Norway | 56.5 | 89.1 | 103.6 | 110.7 | 105.3 | 101.3 | 100.2 | 98.3 | 102.7 | 106.7 | 109.0 | 110.1 | 113.3 | 116.4 |
| Sweden | 46.5 | 81.7 | 91.8 | 107.7 | 110.2 | 111.6 | 110.6 | 103.6 | 101.3 | 115.7 | 130.1 | 132.9 | 140.3 | 146.4 |
| United Kingdom | 67.7 | 90.3 | 87.2 | 94.4 | 101.4 | 105.4 | 105.3 | 100.0 | 101.4 | 106.1 | 107.8 | 108.2 | 109.6 | 110.0 |
| **Total hours** | | | | | | | | | | | | | | |
| United States | 92.1 | 104.4 | 107.5 | 103.8 | 106.6 | 107.1 | 104.8 | 100.4 | 101.4 | 103.6 | 104.0 | 103.7 | 105.5 | 105.6 |
| Canada | 84.1 | 102.1 | 113.5 | 113.0 | 120.0 | 119.9 | 111.9 | 103.8 | 102.6 | 106.6 | 109.1 | 112.0 | 115.4 | 119.0 |
| Japan | 76.3 | 102.3 | 93.8 | 96.6 | 99.8 | 100.8 | 100.9 | 102.0 | 95.6 | 93.7 | 92.0 | 92.2 | 91.5 | 86.1 |
| Belgium | 170.7 | 174.7 | 119.7 | 100.0 | 101.5 | 102.3 | 104.3 | 101.5 | 94.7 | 93.6 | 92.0 | 90.8 | 89.5 | 91.2 |
| Denmark | 136.5 | 129.0 | 101.1 | 109.6 | 107.2 | 104.7 | 103.7 | 102.1 | 94.8 | – | – | – | – | – |
| France | 142.1 | 148.7 | 133.1 | 106.6 | 105.5 | 105.8 | 105.9 | 103.0 | 95.1 | 92.4 | 91.6 | 91.0 | 89.5 | 89.9 |
| Germany | 142.3 | 136.3 | 110.5 | 99.9 | 99.3 | 99.3 | 100.1 | 100.9 | 91.3 | 86.7 | 84.3 | 80.4 | 78.6 | 79.3 |
| Italy | 109.0 | 121.2 | 122.4 | 103.6 | 108.9 | 109.7 | 107.7 | 104.2 | 93.6 | 96.7 | 98.0 | 96.7 | 97.4 | 99.0 |
| Netherlands | 170.6 | 156.2 | 111.8 | 97.7 | 99.0 | 99.8 | 101.5 | 101.0 | 96.9 | 92.4 | 91.6 | 90.5 | 90.8 | 91.2 |
| Norway | 154.0 | 154.3 | 135.0 | 118.6 | 114.3 | 107.1 | 103.7 | 100.8 | 102.1 | 105.2 | 106.9 | 107.9 | 111.1 | 111.9 |
| Sweden | 168.3 | 154.7 | 124.0 | 119.5 | 121.4 | 119.0 | 116.4 | 109.0 | 94.9 | 99.6 | 106.3 | 106.0 | 105.0 | 107.3 |
| United Kingdom | 217.3 | 202.1 | 155.3 | 118.9 | 123.2 | 122.3 | 119.2 | 108.5 | 97.5 | 99.4 | 102.9 | 104.8 | 105.4 | 104.7 |
| **Compensation per hour** | | | | | | | | | | | | | | |
| United States | 14.9 | 23.7 | 55.6 | 80.7 | 84.0 | 86.6 | 90.8 | 95.6 | 102.7 | 105.6 | 107.9 | 109.3 | 113.4 | 119.4 |
| Canada | 10.4 | 17.8 | 47.7 | 75.3 | 77.8 | 82.5 | 89.5 | 94.7 | 99.6 | 100.4 | 103.6 | 102.8 | 106.7 | 110.8 |
| Japan | 4.3 | 16.5 | 58.6 | 77.9 | 79.2 | 84.2 | 90.7 | 95.9 | 104.6 | 106.7 | 109.5 | 110.9 | 113.9 | 115.8 |
| Belgium | 5.4 | 13.7 | 52.5 | 79.7 | 81.1 | 85.9 | 90.1 | 97.3 | 104.8 | 106.1 | 109.2 | 112.0 | 115.2 | 116.0 |
| Denmark | 4.6 | 13.3 | 49.6 | 80.1 | 82.9 | 87.7 | 92.7 | 95.9 | 104.6 | – | – | – | – | – |
| France | 4.3 | 10.3 | 40.8 | 78.6 | 81.6 | 86.0 | 90.6 | 96.2 | 102.8 | 105.0 | 107.6 | 109.5 | 112.3 | 113.9 |
| Germany | 8.1 | 20.7 | 53.6 | 76.0 | 79.1 | 83.2 | 89.4 | 95.1 | 105.9 | 111.7 | 117.7 | 123.7 | 126.6 | 127.6 |
| Italy | 1.6 | 4.7 | 28.2 | 66.7 | 69.3 | 75.9 | 84.4 | 93.6 | 107.5 | 107.8 | 112.8 | 120.9 | 125.9 | 124.8 |
| Netherlands | 6.4 | 20.2 | 64.4 | 87.8 | 87.7 | 88.5 | 90.8 | 95.2 | 103.7 | 108.2 | 110.6 | 113.2 | 115.8 | 118.3 |
| Norway | 4.7 | 11.8 | 39.0 | 78.5 | 83.3 | 87.2 | 92.3 | 97.5 | 101.5 | 104.4 | 109.2 | 113.6 | 119.1 | 126.4 |
| Sweden | 4.1 | 10.8 | 37.4 | 67.3 | 71.7 | 79.4 | 87.6 | 95.4 | 98.0 | 101.1 | 106.2 | 113.4 | 118.3 | 121.5 |
| United Kingdom | 3.1 | 6.3 | 33.2 | 64.8 | 67.7 | 72.9 | 80.9 | 90.5 | 104.3 | 106.5 | 107.4 | 108.2 | 111.4 | 117.8 |
| **Unit labor costs:** National currency basis | | | | | | | | | | | | | | |
| United States | – | – | 77.2 | 85.5 | 85.7 | 89.2 | 92.8 | 97.2 | 100.6 | 97.6 | 93.9 | 93.2 | 92.9 | 93.4 |
| Canada | 25.5 | 30.0 | 63.3 | 82.5 | 85.5 | 89.2 | 93.9 | 99.6 | 97.2 | 94.5 | 95.2 | 95.8 | 96.2 | 99.2 |
| Japan | 30.9 | 43.3 | 91.7 | 96.0 | 93.4 | 94.0 | 95.0 | 96.5 | 104.1 | 104.9 | 100.1 | 95.8 | 93.8 | 96.2 |
| Belgium | 30.1 | 41.7 | 80.3 | 89.7 | 88.1 | 88.7 | 93.0 | 98.1 | 102.3 | 97.9 | 96.4 | 97.6 | 94.6 | 94.7 |
| Denmark | 15.4 | 25.2 | 55.0 | 88.4 | 88.2 | 88.1 | 93.6 | 96.3 | 100.1 | 93.0 | 93.8 | 92.7 | 95.9 | 94.0 |
| France | 19.5 | 24.0 | 61.2 | 96.2 | 93.4 | 93.6 | 96.8 | 99.3 | 102.2 | 96.8 | 94.1 | 95.3 | 91.2 | 89.4 |
| Germany | 27.8 | 39.8 | 69.4 | 86.3 | 86.5 | 87.9 | 90.3 | 93.3 | 105.3 | 103.6 | 105.9 | 107.5 | 103.9 | 100.4 |
| Italy | 8.0 | 12.7 | 44.0 | 78.3 | 79.9 | 84.9 | 91.3 | 98.4 | 104.4 | 102.1 | 103.2 | 109.6 | 111.1 | 109.8 |
| Netherlands | 34.4 | 52.9 | 93.0 | 95.9 | 93.6 | 91.1 | 92.1 | 95.5 | 102.3 | 96.0 | 94.0 | 94.6 | 92.2 | 92.5 |
| Norway | 12.9 | 20.4 | 50.8 | 84.1 | 90.4 | 92.2 | 95.6 | 100.0 | 100.9 | 102.9 | 107.1 | 111.4 | 116.9 | 121.4 |
| Sweden | 14.9 | 20.5 | 50.6 | 74.7 | 79.0 | 84.7 | 92.3 | 100.4 | 91.8 | 87.0 | 86.8 | 90.4 | 88.5 | 89.0 |
| United Kingdom | 9.8 | 14.1 | 59.1 | 81.6 | 82.2 | 84.6 | 91.6 | 98.2 | 100.3 | 99.7 | 102.5 | 104.8 | 107.1 | 112.1 |
| **Unit labor costs:** U.S. dollar basis | | | | | | | | | | | | | | |
| United States | – | – | 77.2 | 85.5 | 85.7 | 89.2 | 92.8 | 97.2 | 100.6 | 97.6 | 93.9 | 93.2 | 92.9 | 93.4 |
| Canada | 31.8 | 34.7 | 65.4 | 75.2 | 83.9 | 91.0 | 97.2 | 105.0 | 91.1 | 83.6 | 83.8 | 84.9 | 83.9 | 80.8 |
| Japan | 10.9 | 15.3 | 51.3 | 84.2 | 92.4 | 86.3 | 83.1 | 90.9 | 118.8 | 130.1 | 135.1 | 111.7 | 98.3 | 93.1 |
| Belgium | 19.4 | 27.0 | 88.3 | 77.2 | 77.0 | 72.3 | 89.5 | 92.3 | 95.1 | 94.2 | 105.2 | 101.4 | 84.9 | 83.8 |
| Denmark | 13.5 | 20.3 | 58.9 | 77.9 | 79.0 | 72.6 | 91.3 | 90.8 | 93.2 | 88.3 | 101.1 | 96.5 | 87.6 | 84.7 |
| France | 21.1 | 23.0 | 76.7 | 84.7 | 82.9 | 77.7 | 94.1 | 93.1 | 95.5 | 92.4 | 99.9 | 98.6 | 82.6 | 80.2 |
| Germany | 10.4 | 17.1 | 59.6 | 74.9 | 76.9 | 73.0 | 87.3 | 87.8 | 99.4 | 99.8 | 115.5 | 111.6 | 93.5 | 89.1 |
| Italy | 16.0 | 24.9 | 63.3 | 74.4 | 75.6 | 76.2 | 93.8 | 97.6 | 81.8 | 78.1 | 78.0 | 87.5 | 80.3 | 77.9 |
| Netherlands | 16.0 | 25.7 | 82.3 | 83.2 | 83.2 | 75.5 | 88.9 | 89.8 | 96.8 | 92.8 | 103.0 | 98.6 | 83.0 | 82.0 |
| Norway | 11.3 | 17.8 | 63.9 | 77.5 | 86.1 | 82.9 | 95.0 | 95.7 | 88.3 | 90.7 | 105.0 | 107.1 | 102.5 | 99.9 |
| Sweden | 16.8 | 23.0 | 69.6 | 68.5 | 75.0 | 76.4 | 90.8 | 96.6 | 68.6 | 65.7 | 70.8 | 78.5 | 67.5 | 65.2 |
| United Kingdom | 15.6 | 19.2 | 77.8 | 75.7 | 82.9 | 78.5 | 92.5 | 98.2 | 85.3 | 86.5 | 91.6 | 95.6 | 99.3 | 105.2 |

– Data not available.

## 46. Occupational injury and illness rates by industry,[1] United States

| Industry and type of case[2] | Incidence rates per 100 full-time workers[3] | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | 1988 | 1989[1] | 1990 | 1991 | 1992 | 1993[4] | 1994[4] | 1995[4] | 1996[4] | 1998[4] | 1999[4] |
| **PRIVATE SECTOR[5]** | | | | | | | | | | | |
| Total cases | 8.6 | 8.6 | 8.8 | 8.4 | 8.9 | 8.5 | 8.4 | 8.1 | 7.4 | 6.7 | 6.3 |
| Lost workday cases | 4.0 | 4.0 | 4.1 | 3.9 | 3.9 | 3.8 | 3.8 | 3.6 | 3.4 | 3.1 | 3.0 |
| Lost workdays | 76.1 | 78.7 | 84.0 | 86.5 | 93.8 | – | – | – | – | – | – |
| **Agriculture, forestry, and fishing[5]** | | | | | | | | | | | |
| Total cases | 10.9 | 10.9 | 11.6 | 10.8 | 11.6 | 11.2 | 10.0 | 9.7 | 8.7 | 7.9 | 7.3 |
| Lost workday cases | 5.6 | 5.7 | 5.9 | 5.4 | 5.4 | 5.0 | 4.7 | 4.3 | 3.9 | 3.9 | 3.4 |
| Lost workdays | 101.8 | 100.9 | 112.2 | 108.3 | 126.9 | – | – | – | – | – | – |
| **Mining** | | | | | | | | | | | |
| Total cases | 8.8 | 8.5 | 8.3 | 7.4 | 7.3 | 6.8 | 6.3 | 6.2 | 5.4 | 4.9 | 4.4 |
| Lost workday cases | 5.1 | 4.8 | 5.0 | 4.5 | 4.1 | 3.9 | 3.9 | 3.9 | 3.2 | 2.9 | 2.7 |
| Lost workdays | 152.1 | 137.2 | 119.5 | 129.6 | 204.7 | – | – | – | – | – | – |
| **Construction** | | | | | | | | | | | |
| Total cases | 14.6 | 14.3 | 14.2 | 13.0 | 13.1 | 12.2 | 11.8 | 10.6 | 9.9 | 8.8 | 8.6 |
| Lost workday cases | 6.8 | 6.8 | 6.7 | 6.1 | 5.8 | 5.5 | 5.5 | 4.9 | 4.5 | 4.0 | 4.2 |
| Lost workdays | 142.2 | 143.3 | 147.9 | 148.1 | 161.9 | – | – | – | – | – | – |
| General building contractors: | | | | | | | | | | | |
| Total cases | 14.0 | 13.9 | 13.4 | 12.0 | 12.2 | 11.5 | 10.9 | 9.8 | 9.0 | 8.4 | 8.0 |
| Lost workday cases | 6.4 | 6.5 | 6.4 | 5.5 | 5.4 | 5.1 | 5.1 | 4.4 | 4.0 | 3.9 | 3.7 |
| Lost workdays | 132.2 | 137.3 | 137.6 | 132.0 | 142.7 | – | – | – | – | – | – |
| Heavy construction, except building: | | | | | | | | | | | |
| Total cases | 15.1 | 13.8 | 13.8 | 12.8 | 12.1 | 11.1 | 10.2 | 9.9 | 9.0 | 8.2 | 7.8 |
| Lost workday cases | 7.0 | 6.5 | 6.3 | 6.0 | 5.4 | 5.1 | 5.0 | 4.8 | 4.3 | 4.1 | 3.8 |
| Lost workdays | 162.3 | 147.1 | 144.6 | 160.1 | 165.8 | – | – | – | – | – | – |
| Special trades contractors: | | | | | | | | | | | |
| Total cases | 14.7 | 14.6 | 14.7 | 13.5 | 13.8 | 12.8 | 12.5 | 11.1 | 10.4 | 9.1 | 8.9 |
| Lost workday cases | 7.0 | 6.9 | 6.9 | 6.3 | 6.1 | 5.8 | 5.8 | 5.0 | 4.8 | 4.1 | 4.4 |
| Lost workdays | 141.1 | 144.9 | 153.1 | 151.3 | 168.3 | – | – | – | – | – | – |
| **Manufacturing** | | | | | | | | | | | |
| Total cases | 13.1 | 13.1 | 13.2 | 12.7 | 12.5 | 12.1 | 12.2 | 11.6 | 10.6 | 9.7 | 9.2 |
| Lost workday cases | 5.7 | 5.8 | 5.8 | 5.6 | 5.4 | 5.3 | 5.5 | 5.3 | 4.9 | 4.7 | 4.6 |
| Lost workdays | 107.4 | 113.0 | 120.7 | 121.5 | 124.6 | – | – | – | – | – | – |
| Durable goods: | | | | | | | | | | | |
| Total cases | 14.2 | 14.1 | 14.2 | 13.6 | 13.4 | 13.1 | 13.5 | 12.8 | 11.6 | 10.7 | 10.1 |
| Lost workday cases | 5.9 | 6.0 | 6.0 | 5.7 | 5.5 | 5.4 | 5.7 | 5.6 | 5.1 | 5.0 | 4.8 |
| Lost workdays | 111.1 | 116.5 | 123.3 | 122.9 | 126.7 | – | – | – | – | – | – |
| Lumber and wood products: | | | | | | | | | | | |
| Total cases | 19.5 | 18.4 | 18.1 | 16.8 | 16.3 | 15.9 | 15.7 | 14.9 | 14.2 | 13.2 | 13.0 |
| Lost workday cases | 10.0 | 9.4 | 8.8 | 8.3 | 7.6 | 7.6 | 7.7 | 7.0 | 6.8 | 6.8 | 6.7 |
| Lost workdays | 189.1 | 177.5 | 172.5 | 172.0 | 165.8 | – | – | – | – | – | – |
| Furniture and fixtures: | | | | | | | | | | | |
| Total cases | 16.6 | 16.1 | 16.9 | 15.9 | 14.8 | 14.6 | 15.0 | 13.9 | 12.2 | 11.4 | 11.5 |
| Lost workday cases | 7.3 | 7.2 | 7.8 | 7.2 | 6.6 | 6.5 | 7.0 | 6.4 | 5.4 | 5.7 | 5.9 |
| Lost workdays | 115.7 | – | – | – | 128.4 | – | – | – | – | – | – |
| Stone, clay, and glass products: | | | | | | | | | | | |
| Total cases | 16.0 | 15.5 | 15.4 | 14.8 | 13.6 | 13.8 | 13.2 | 12.3 | 12.4 | 11.8 | 10.7 |
| Lost workday cases | 7.5 | 7.4 | 7.3 | 6.8 | 6.1 | 6.3 | 6.5 | 5.7 | 6.0 | 6.0 | 5.4 |
| Lost workdays | 141.0 | 149.8 | 160.5 | 156.0 | 152.2 | – | – | – | – | – | – |
| Primary metal industries: | | | | | | | | | | | |
| Total cases | 19.4 | 18.7 | 19.0 | 17.7 | 17.5 | 17.0 | 16.8 | 16.5 | 15.0 | 14.0 | 12.9 |
| Lost workday cases | 8.2 | 8.1 | 8.1 | 7.4 | 7.1 | 7.3 | 7.2 | 7.2 | 6.8 | 7.0 | 6.3 |
| Lost workdays | 161.3 | 168.3 | 180.2 | 169.1 | 175.5 | – | – | – | – | – | – |
| Fabricated metal products: | | | | | | | | | | | |
| Total cases | 18.8 | 18.5 | 18.7 | 17.4 | 16.8 | 16.2 | 16.4 | 15.8 | 14.4 | 13.9 | 12.6 |
| Lost workday cases | 8.0 | 7.9 | 7.9 | 7.1 | 6.6 | 6.7 | 6.7 | 6.9 | 6.2 | 6.5 | 6.0 |
| Lost workdays | 138.8 | 147.6 | 155.7 | 146.6 | 144.0 | – | – | – | – | – | – |
| Industrial machinery and equipment: | | | | | | | | | | | |
| Total cases | 12.1 | 12.1 | 12.0 | 11.2 | 11.1 | 11.1 | 11.6 | 11.2 | 9.9 | 9.5 | 8.5 |
| Lost workday cases | 4.7 | 4.8 | 4.7 | 4.4 | 4.2 | 4.2 | 4.4 | 4.4 | 4.0 | 4.0 | 3.7 |
| Lost workdays | 82.8 | 86.8 | 88.9 | 86.6 | 87.7 | – | – | – | – | – | – |
| Electronic and other electrical equipment: | | | | | | | | | | | |
| Total cases | 8.0 | 9.1 | 9.1 | 8.6 | 8.4 | 8.3 | 8.3 | 7.6 | 6.8 | 5.9 | 5.7 |
| Lost workday cases | 3.3 | 3.9 | 3.8 | 3.7 | 3.6 | 3.5 | 3.6 | 3.3 | 3.1 | 2.8 | 2.8 |
| Lost workdays | 64.6 | 77.5 | 79.4 | 83.0 | 81.2 | – | – | – | – | – | – |
| Transportation equipment: | | | | | | | | | | | |
| Total cases | 17.7 | 17.7 | 17.8 | 18.3 | 18.7 | 18.5 | 19.6 | 18.6 | 16.3 | 14.6 | 13.7 |
| Lost workday cases | 6.6 | 6.8 | 6.9 | 7.0 | 7.1 | 7.1 | 7.8 | 7.9 | 7.0 | 6.6 | 6.4 |
| Lost workdays | 134.2 | 138.6 | 153.7 | 166.1 | 186.6 | – | – | – | – | – | – |
| Instruments and related products: | | | | | | | | | | | |
| Total cases | 6.1 | 5.6 | 5.9 | 6.0 | 5.9 | 5.6 | 5.9 | 5.3 | 5.1 | 4.0 | 4.0 |
| Lost workday cases | 2.6 | 2.5 | 2.7 | 2.7 | 2.7 | 2.5 | 2.7 | 2.4 | 2.3 | 1.9 | 1.8 |
| Lost workdays | 51.5 | 55.4 | 57.8 | 64.4 | 65.3 | – | – | – | – | – | – |
| Miscellaneous manufacturing industries: | | | | | | | | | | | |
| Total cases | 11.3 | 11.1 | 11.3 | 11.3 | 10.7 | 10.0 | 9.9 | 9.1 | 9.5 | 8.1 | 8.4 |
| Lost workday cases | 5.1 | 5.1 | 5.1 | 5.1 | 5.0 | 4.6 | 4.5 | 4.3 | 4.4 | 3.9 | 4.0 |
| Lost workdays | 91.0 | 97.6 | 113.1 | 104.0 | 108.2 | – | – | – | – | – | – |

See footnotes at end of table

## 46. Continued—Occupational injury and illness rates by industry,[1] United States

| Industry and type of case[2] | 1988 | 1989[1] | 1990 | 1991 | 1992 | 1993[4] | 1994[4] | 1995[4] | 1996[4] | 1997[4] | 1998[4] | 1999[4] |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Nondurable goods: | | | | | | | | | | | | |
| Total cases | 11.4 | 11.6 | 11.7 | 11.5 | 11.3 | 10.7 | 10.5 | 9.9 | 9.2 | 8.8 | 8.2 | 7.8 |
| Lost workday cases | 5.4 | 5.5 | 5.6 | 5.5 | 5.3 | 5.0 | 5.1 | 4.9 | 4.6 | 4.4 | 4.3 | 4.2 |
| Lost workdays | 101.7 | 107.8 | 116.9 | 119.7 | 121.8 | – | – | – | – | – | – | – |
| Food and kindred products: | | | | | | | | | | | | |
| Total cases | 18.5 | 18.5 | 20.0 | 19.5 | 18.8 | 17.6 | 17.1 | 16.3 | 15.0 | 14.5 | 13.6 | 12.7 |
| Lost workday cases | 9.2 | 9.3 | 9.9 | 9.9 | 9.5 | 8.9 | 9.2 | 8.7 | 8.0 | 8.0 | 7.5 | 7.3 |
| Lost workdays | 169.7 | 174.7 | 202.6 | 207.2 | 211.9 | – | – | – | – | – | – | – |
| Tobacco products: | | | | | | | | | | | | |
| Total cases | 9.3 | 8.7 | 7.7 | 6.4 | 6.0 | 5.8 | 5.3 | 5.6 | 6.7 | 5.9 | 6.4 | 5.5 |
| Lost workday cases | 2.9 | 3.4 | 3.2 | 2.8 | 2.4 | 2.3 | 2.4 | 2.6 | 2.8 | 2.7 | 3.4 | 2.2 |
| Lost workdays | 53.0 | 64.2 | 62.3 | 52.0 | 42.9 | – | – | – | – | – | – | – |
| Textile mill products: | | | | | | | | | | | | |
| Total cases | 9.6 | 10.3 | 9.6 | 10.1 | 9.9 | 9.7 | 8.7 | 8.2 | 7.8 | 6.7 | 7.4 | 6.4 |
| Lost workday cases | 4.0 | 4.2 | 4.0 | 4.4 | 4.2 | 4.1 | 4.0 | 4.1 | 3.6 | 3.1 | 3.4 | 3.2 |
| Lost workdays | 78.8 | 81.4 | 85.1 | 88.3 | 87.1 | – | – | – | – | – | – | – |
| Apparel and other textile products: | | | | | | | | | | | | |
| Total cases | 8.1 | 8.6 | 8.8 | 9.2 | 9.5 | 9.0 | 8.9 | 8.2 | 7.4 | 7.0 | 6.2 | 5.8 |
| Lost workday cases | 3.5 | 3.8 | 3.9 | 4.2 | 4.0 | 3.8 | 3.9 | 3.6 | 3.3 | 3.1 | 2.6 | 2.8 |
| Lost workdays | 68.2 | 80.5 | 92.1 | 99.9 | 104.6 | – | – | – | – | – | – | – |
| Paper and allied products: | | | | | | | | | | | | |
| Total cases | 13.1 | 12.7 | 12.1 | 11.2 | 11.0 | 9.9 | 9.6 | 8.5 | 7.9 | 7.3 | 7.1 | 7.0 |
| Lost workday cases | 5.9 | 5.8 | 5.5 | 5.0 | 5.0 | 4.6 | 4.5 | 4.2 | 3.8 | 3.7 | 3.7 | 3.7 |
| Lost workdays | 124.3 | 132.9 | 124.8 | 122.7 | 125.9 | – | – | – | – | – | – | – |
| Printing and publishing: | | | | | | | | | | | | |
| Total cases | 6.6 | 6.9 | 6.9 | 6.7 | 7.3 | 6.9 | 6.7 | 6.4 | 6.0 | 5.7 | 5.4 | 5.0 |
| Lost workday cases | 3.2 | 3.3 | 3.3 | 3.2 | 3.2 | 3.1 | 3.0 | 3.0 | 2.8 | 2.7 | 2.8 | 2.6 |
| Lost workdays | 59.8 | 63.8 | 69.8 | 74.5 | 74.8 | – | – | – | – | – | – | – |
| Chemicals and allied products: | | | | | | | | | | | | |
| Total cases | 7.0 | 7.0 | 6.5 | 6.4 | 6.0 | 5.9 | 5.7 | 5.5 | 4.8 | 4.8 | 4.2 | 4.4 |
| Lost workday cases | 3.3 | 3.2 | 3.1 | 3.1 | 2.8 | 2.7 | 2.8 | 2.7 | 2.4 | 2.3 | 2.1 | 2.3 |
| Lost workdays | 59.0 | 63.4 | 61.6 | 62.4 | 64.2 | – | – | – | – | – | – | – |
| Petroleum and coal products: | | | | | | | | | | | | |
| Total cases | 7.0 | 6.6 | 6.6 | 6.2 | 5.9 | 5.2 | 4.7 | 4.8 | 4.6 | 4.3 | 3.9 | 4.1 |
| Lost workday cases | 3.2 | 3.3 | 3.1 | 2.9 | 2.8 | 2.5 | 2.3 | 2.4 | 2.5 | 2.2 | 1.8 | 1.8 |
| Lost workdays | 68.4 | 68.1 | 77.3 | 68.2 | 71.2 | – | – | – | – | – | – | – |
| Rubber and miscellaneous plastics products: | | | | | | | | | | | | |
| Total cases | 16.3 | 16.2 | 16.2 | 15.1 | 14.5 | 13.9 | 14.0 | 12.9 | 12.3 | 11.9 | 11.2 | 10.1 |
| Lost workday cases | 8.1 | 8.0 | 7.8 | 7.2 | 6.8 | 6.5 | 6.7 | 6.5 | 6.3 | 5.8 | 5.8 | 5.5 |
| Lost workdays | 142.9 | 147.2 | 151.3 | 150.9 | 153.3 | – | – | – | – | – | – | – |
| Leather and leather products: | | | | | | | | | | | | |
| Total cases | 11.4 | 13.6 | 12.1 | 12.5 | 12.1 | 12.1 | 12.0 | 11.4 | 10.7 | 10.6 | 9.8 | 10.3 |
| Lost workday cases | 5.6 | 6.5 | 5.9 | 5.9 | 5.4 | 5.5 | 5.3 | 4.8 | 4.5 | 4.3 | 4.5 | 5.0 |
| Lost workdays | 128.2 | 130.4 | 152.3 | 140.8 | 128.5 | – | – | – | – | – | – | – |
| **Transportation and public utilities** | | | | | | | | | | | | |
| Total cases | 8.9 | 9.2 | 9.6 | 9.3 | 9.1 | 9.5 | 9.3 | 9.1 | 8.7 | 8.2 | 7.3 | 7.3 |
| Lost workday cases | 5.1 | 5.3 | 5.5 | 5.4 | 5.1 | 5.4 | 5.5 | 5.2 | 5.1 | 4.8 | 4.3 | 4.4 |
| Lost workdays | 118.6 | 121.5 | 134.1 | 140.0 | 144.0 | – | – | – | – | – | – | – |
| **Wholesale and retail trade** | | | | | | | | | | | | |
| Total cases | 7.8 | 8.0 | 7.9 | 7.6 | 8.4 | 8.1 | 7.9 | 7.5 | 6.8 | 6.7 | 6.5 | 6.1 |
| Lost workday cases | 3.5 | 3.6 | 3.5 | 3.4 | 3.5 | 3.4 | 3.4 | 3.2 | 2.9 | 3.0 | 2.8 | 2.7 |
| Lost workdays | 60.9 | 63.5 | 65.6 | 72.0 | 80.1 | – | – | – | – | – | – | – |
| Wholesale trade: | | | | | | | | | | | | |
| Total cases | 7.6 | 7.7 | 7.4 | 7.2 | 7.6 | 7.8 | 7.7 | 7.5 | 6.6 | 6.5 | 6.5 | 6.3 |
| Lost workday cases | 3.8 | 4.0 | 3.7 | 3.7 | 3.6 | 3.7 | 3.8 | 3.6 | 3.4 | 3.2 | 3.3 | 3.3 |
| Lost workdays | 69.2 | 71.9 | 71.5 | 79.2 | 82.4 | – | – | – | – | – | – | – |
| Retail trade: | | | | | | | | | | | | |
| Total cases | 7.9 | 8.1 | 8.1 | 7.7 | 8.7 | 8.2 | 7.9 | 7.5 | 6.9 | 6.8 | 6.5 | 6.1 |
| Lost workday cases | 3.4 | 3.4 | 3.4 | 3.3 | 3.4 | 3.3 | 3.3 | 3.0 | 2.8 | 2.9 | 2.7 | 2.5 |
| Lost workdays | 57.6 | 60.0 | 63.2 | 69.1 | 79.2 | – | – | – | – | – | – | – |
| **Finance, insurance, and real estate** | | | | | | | | | | | | |
| Total cases | 2.0 | 2.0 | 2.4 | 2.4 | 2.9 | 2.9 | 2.7 | 2.6 | 2.4 | 2.2 | .7 | 1.8 |
| Lost workday cases | .9 | .9 | 1.1 | 1.1 | 1.2 | 1.2 | 1.1 | 1.0 | .9 | .9 | .5 | .8 |
| Lost workdays | 17.2 | 17.6 | 27.3 | 24.1 | 32.9 | – | – | – | – | – | – | – |
| **Services** | | | | | | | | | | | | |
| Total cases | 5.4 | 5.5 | 6.0 | 6.2 | 7.1 | 6.7 | 6.5 | 6.4 | 6.0 | 5.6 | 5.2 | 4.9 |
| Lost workday cases | 2.6 | 2.7 | 2.8 | 2.8 | 3.0 | 2.8 | 2.8 | 2.8 | 2.6 | 2.5 | 2.4 | 2.2 |
| Lost workdays | 47.7 | 51.2 | 56.4 | 60.0 | 68.6 | – | – | – | – | – | – | – |

[1] Data for 1989 and subsequent years are based on the *Standard Industrial Classification Manual*, 1987 Edition. For this reason, they are not strictly comparable with data for the years 1985–88, which were based on the *Standard Industrial Classification Manual*, 1972 Edition, 1977 Supplement.

[2] Beginning with the 1992 survey, the annual survey measures only nonfatal injuries and illnesses, while past surveys covered both fatal and nonfatal incidents. To better address fatalities, a basic element of workplace safety, BLS implemented the Census of Fatal Occupational Injuries.

[3] The incidence rates represent the number of injuries and illnesses or lost workdays per 100 full-time workers and were calculated as (N/EH) X 200,000, where:

N = number of injuries and illnesses or lost workdays;

EH = total hours worked by all employees during the calendar year; and

200,000 = base for 100 full-time equivalent workers (working 40 hours per week, 50 weeks per year).

[4] Beginning with the 1993 survey, lost workday estimates will not be generated. As of 1992, BLS began generating percent distributions and the median number of days away from work by industry and for groups of workers sustaining similar work disabilities.

[5] Excludes farms with fewer than 11 employees since 1976.

– Data not available.

## 47. Fatal occupational injuries by event or exposure, 1993–98

| Event or exposure[1] | Fatalities | | | |
|---|---|---|---|---|
| | 1993–97 | 1997[2] | 1998 | |
| | Average | Number | Number | Percent |
| Total | 6,335 | 6,238 | 6,026 | 100 |
| **Transportation incidents** | 2,611 | 2,605 | 2,630 | 44 |
| Highway incident | 1,334 | 1,393 | 1,431 | 24 |
| Collision between vehicles, mobile equipment | 652 | 640 | 701 | 12 |
| Moving in same direction | 109 | 103 | 118 | 2 |
| Moving in opposite directions, oncoming | 234 | 230 | 271 | 4 |
| Moving in intersection | 132 | 142 | 142 | 2 |
| Vehicle struck stationary object or equipment | 249 | 282 | 306 | 5 |
| Noncollision incident | 360 | 387 | 373 | 6 |
| Jackknifed or overturned—no collision | 267 | 298 | 300 | 5 |
| Nonhighway (farm, industrial premises) incident | 388 | 377 | 384 | 6 |
| Overturned | 214 | 216 | 216 | 4 |
| Aircraft | 315 | 261 | 223 | 4 |
| Worker struck by a vehicle | 373 | 367 | 413 | 7 |
| Water vehicle incident | 106 | 109 | 112 | 2 |
| Railway | 83 | 93 | 60 | 1 |
| **Assaults and violent acts** | 1,241 | 1,111 | 960 | 16 |
| Homicides | 995 | 860 | 709 | 12 |
| Shooting | 810 | 708 | 569 | 9 |
| Stabbing | 75 | 73 | 61 | 1 |
| Other, including bombing | 110 | 79 | 79 | 1 |
| Self-inflicted injuries | 215 | 216 | 223 | 4 |
| **Contact with objects and equipment** | 1,005 | 1,035 | 941 | 16 |
| Struck by object | 573 | 579 | 517 | 9 |
| Struck by falling object | 369 | 384 | 317 | 5 |
| Struck by flying object | 65 | 54 | 58 | 1 |
| Caught in or compressed by equipment or objects | 290 | 320 | 266 | 4 |
| Caught in running equipment or machinery | 153 | 189 | 129 | 2 |
| Caught in or crushed in collapsing materials | 124 | 118 | 140 | 2 |
| **Falls** | 668 | 716 | 702 | 12 |
| Fall to lower level | 591 | 653 | 623 | 10 |
| Fall from ladder | 94 | 116 | 111 | 2 |
| Fall from roof | 139 | 154 | 156 | 3 |
| Fall from scaffold, staging | 83 | 87 | 97 | 2 |
| Fall on same level | 52 | 44 | 51 | 1 |
| **Exposure to harmful substances or environments** | 586 | 554 | 572 | 9 |
| Contact with electric current | 320 | 298 | 334 | 6 |
| Contact with overhead power lines | 128 | 138 | 153 | 3 |
| Contact with temperature extremes | 43 | 40 | 46 | 1 |
| Exposure to caustic, noxious, or allergenic substances | 120 | 123 | 104 | 2 |
| Inhalation of substances | 70 | 59 | 48 | 1 |
| Oxygen deficiency | 101 | 90 | 87 | 1 |
| Drowning, submersion | 80 | 72 | 75 | 1 |
| **Fires and explosions** | 199 | 196 | 205 | 3 |
| **Other events or exposures**[3] | 26 | 21 | 16 | - |

[1] Based on the 1992 BLS Occupational Injury and Illness Classification Structures.

[2] The BLS news release issued August 12, 1998, reported a total of 6,218 fatal work injuries for calendar year 1997. Since then, an additional 20 job-related fatalities were identified, bringing the total job-related fatality count for 1997 to 6,238.

[3] Includes the category "Bodily reaction and exertion."

NOTE: Totals for major categories may include subcategories not shown separately. Percentages may not add to totals because of rounding. Dash indicates less than 0.5 percent.

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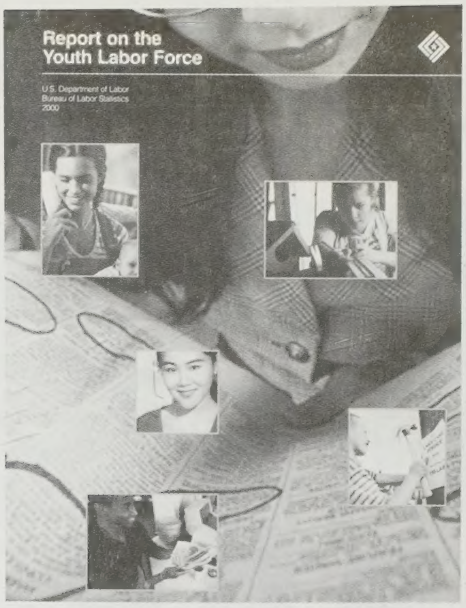
# Report on the Youth Labor Force

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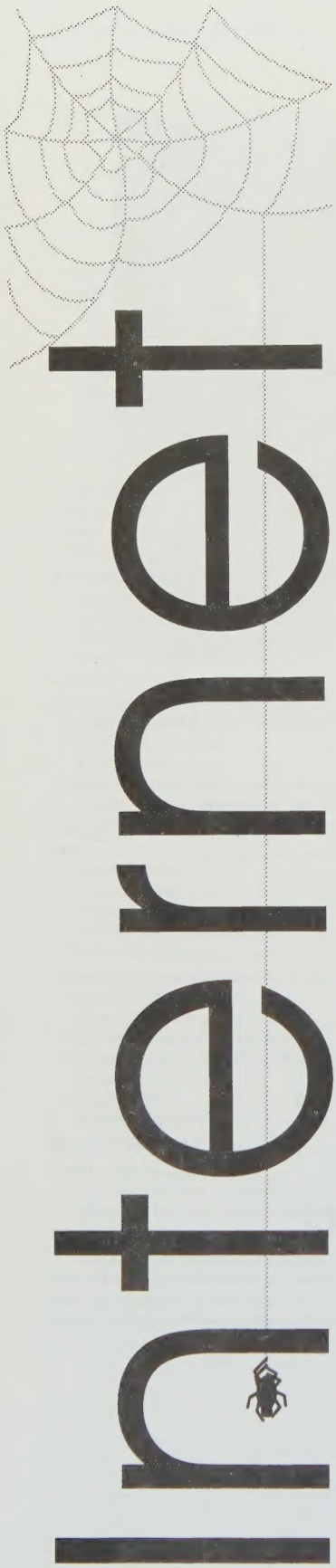


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|---|---|---|---|---|---|---|---|
| **Employment situation** | February 2 | January | March 9 | February | April 6 | March | 1; 4–20 |
| **Productivity and costs** | February 7 | 4th quarter | March 6 | 4th quarter | | | 2; 39–42 |
| **U.S. Import and Export Price Indexes** | February 15 | January | March 15 | February | April 11 | March | 34–38 |
| **Producer Price Indexes** | February 16 | January | March 16 | February | April 12 | March | 2; 31–33 |
| **Consumer Price indexes** | February 21 | January | March 21 | February | April 17 | March | 2; 28–30 |
| **Real earnings** | February 21 | January | March 21 | February | April 17 | March | 14, 16 |
| **Employment Cost Indexes** | | | | | April 26 | 1st quarter | 1–3; 21–24 |